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Sarasin Basic Report

Sarasin Research

How sustainable is the Food industry?

A study of environmental and social compatibility of food & beverage companies

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Summary

Conventional agricultural production, and with it the entire food processing industry, is experiencing a crisis at the moment. Recent scandals in meat production as well as discussions about genetically modified organisms (GMOs) have shaken consumers' belief that food products are fundamentally innocuous. The way in which the Food industry responds to these challenges is particularly interesting to investors who apply sustainable growth criteria. To this end, our study looks at the world's 14 biggest food companies, four other small and mid-caps as well as a number of alternative companies active in the field of organic food and FairTrade produce.

As far as in-house environmental protection goes, most «conventional» companies can boast significant improvements, with some of them demonstrating this progress with impressive statistics. An exception are the North American companies examined, which still seem to have no interest at all in improving the eco-efficiency of their own production processes. Virtually all the conventional food companies have a lot of ground to make up in the pre-production area, i.e. the agricultural suppliers. Companies are not sufficiently aware of the influence they can exert on agricultural production methods, and do not take enough responsibility in this regard, particularly concerning the establishment of minimum requirements for cultivations methods and animal husbandry. Only the organic food companies have a good track record in this area. By adhering to the principle of only offering organic products wherever possible, they can minimise environmental impact in the pre-production phase.

As far as social criteria are concerned, it is clear that food production plays a central role both from the perspective of the customer (food is a basic requirement) and of society as a whole (public health, promotion of healthy lifestyles). Nowadays consumers want transparent and extensive information about the manufacture and origin of the food they eat. Food companies ignore this at their own risk. Traditional food companies are still not paying enough attention to the social conditions of the workers employed by the suppliers they use. Once again, the pioneering companies in the second group of our study excel in this field, thereby gaining more legitimacy and broader acceptance. In another controversial area – the use of GMOs – many conventional food companies behave in an opportunist manner. They explicitly refrain from offering products containing GMO's where consumers show scant acceptance. This reactive approach is hardly ideal from the point of view of far-sighted risk management.

Of the six most sustainable companies Unilever was the clear leader followed by Orkla, Cadbury Schweppes, Lindt & Sprüngli, Kikkoman and Numico. Seven companies achieved an average rating (Raisio, Danone, H.J. Heinz, Nestlé, General Mills, Danisco and Kellogg) while five companies were below average (PepsiCo, Coca-Cola, Sara Lee, ConAgra Foods and Campbell Soup). The best performers in the organic foods group were Horizon Organic and Green Mountain Coffee. United Natural Foods, Hain-Celestial and Odwalla were rated as average, while Wessanen was below average.

Of special interest for investors were the results of the financial analysis: the environmentally and socially most sustainable companies also outperformed on the stock market. The top group of conventional food producers outperformed the benchmark index by more than 56 percentage points over the last five years, while the top group of organic food producers beat the index by as much as 400 percentage points over the last three years.

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1 Introduction

The food industry as a whole is facing a crisis

For some time now the traditional farming industry, and therefore inevitably the entire food processing industry as well, has been in a definite crisis. Scandals in meat production (BSE, scrapie, foot and mouth disease) and discussions about the merits and dangers of genetically modified organisms (GMOs) and plants have unnerved consumers and shaken the public's confidence in the quality of the food they buy.

These problems, combined with the effect of fundamental trends such as population explosion, dwindling natural resources, increasing globalisation of trade and changing consumer patterns, are presenting enormous challenges to agriculture and the food industry. According to a recent study by the University of California in Santa Barbara[1], agriculture is set to be one of the biggest causes of global environmental change over the next 50 years. It could have as much of an impact as climatic change. The study concludes that it is essential for farming to adopt a more moderated and sustainable approach. Similar views are slowly gaining acceptance in political circles as well. Both the EU and various European governments are giving serious thought to sweeping agricultural reform.

High growth rates in the organic food market

Given this backdrop, the opportunities presented by organic farming are particularly interesting, as its strategic direction could offer a sustainable alternative to traditional methods of industrial production and cultivation. The production and sale of organic fare now plays an extremely important role in the global food market. In Europe more than 3.7 million hectares are now being farmed organically, almost 2% of the entire land suitable for cultivation. Even more impressive are the high growth rates – between 10%-40% - recorded in this extremely dynamic market, which are far superior to those currently achieved by the conventional food industry. In many regions the percentage of land farmed organically has already reached double figures. In North America, more than one million hectares are being farmed by organic methods. According to an ITC study[2], the global market volume for organic produce is estimated at approximately USD 20 billion.

In the medium term, annual growth rates for organic food are estimated at 10%-30% for Europe and 15%-20% for the USA. This means that the proportion of land farmed organically could grow from the current level of 1% to around 10% in the bigger markets over the next few years[3].

FAO supports organic farming

The FAO (*Food and Agriculture Organisation*), a UN body, believes that organic farming is a viable method of producing food. It has even defined its own guidelines for organic produce[4]. Nadia Scialabba, head of the

[1] David Tilman et al. (2001) «The global impact of humans caused by anything except climate change». National Center for Ecological Analysis and Synthesis, University of California at Santa Barbara, USA
[2] International Trade Centre (1999), «Organic Food and Beverages: World Supply and Major European Markets».
[3] Stiftung Ökologie & Landbau (The Organic Farming Trust), Special Issue No. 74 (2001).
[4] FAO/WHO Codex Alimentarius Commission, Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods (1999).

FAO's Environment unit and expert in organic farming, believes that the unique value of organic cultivation lies in the avoidance of unforeseeable problems associated with intensive farming[5]. The FAO also points to the high environmental costs typically associated with most conventional food production systems.

FairTrade is increasingly becoming an integral part of organic foods

The sustainable dimension of organic farming is not limited solely to environmental aspects, however: fair trade considerations also play an important role. For a long time these two trends have developed independently of each other. But recently more and more products are explicitly focusing on both these aspects of sustainability[6]. Countries in the southern hemisphere therefore have good opportunities for marketing organic and FairTrade produce, as both European and US markets are wide open to products that cannot be commercially grown at home, such as coffee, tea, cocoa and tropical fruit.

Food industry is very important for investors as well

The enormous role that food plays in our daily lives and the developments described make the food industry a particularly interesting sector for investors. To provide an overview of the current situation and come up with potential courses of action, this report analyses the world's 14 biggest food producers and four interesting small and mid-caps, as well as a selection of suppliers of organic and FairTrade products.

Chapter 2 provides a detailed explanation of the methods we use to assess the sustainability of companies. Chapter 3 presents the results of our analysis, with a direct comparison of the various companies. Finally, Chapter 4 provides a financial analysis of the stocks that show the best sustainability ratings.

[5] Scialabba, Nadia (2000), Factors influencing organic agriculture policies with a focus on developing countries, IFOAM 2000 Scientific Conference, Basel, 28-31 August 2000

[6] A successful example are the organic bananas and organic coffees under the Max Havelaar label.

2 Methodology

2.1 General approach

Sarasin's environmental and social analysis

Sarasin's proprietary concept for sustainability analysis is based on an assessment of both environmental and social criteria. We also performed a conventional financial analysis of all the companies studied[7]. In what follows, however, we concentrate mainly on the methods used to produce our social and environmental ratings.

Case study: How sustainable is an oil company compared with an educational establishment?

> *Company A is an oil company. It is well ahead of the competition both in terms of environmental and social benchmarks, and within its industry (relative rating) it can be classed as a leader. However, the core activity of the company is extremely damaging to the environment, because of the enormous consumption of energy used in oil exploration, transport and refining, and the emission of toxic gases into the atmosphere both at the refinery stage and when burning the product itself (absolute rating).*
>
> *Company B is active in the field of education. In terms of environmental and social commitment, the company is less successful than its sector peers (relative rating). While its core activity is certainly not totally harmless to the environment, its impact is obviously far less damaging than the exploration and refining of crude oil. Does this mean Company A deserves a better or worse overall sustainability rating than Company B?*
>
> *We solve this problem with our two-dimensional rating concept. All the companies are allocated an exact position on the **Sarasin sustainability matrix**, which shows the absolute rating (sustainability of the industry itself) on the horizontal axis, and the relative rating (sustainability vs. its peers) on the vertical axis (see Figure 3, page 6).*

«Absolute» and «relative» environmental and social rating

In our analysis we make a distinction between absolute and relative environmental and social aspects. The term «absolute» refers to the environmental and social impact of a company by virtue of its core activity, which is typical for its industry and is closely correlated to the products manufactured and the technologies used. The «relative» rating is an indication of how well the company manages its environmental and social impact compared with its peers in the same industry.

2.1.1 Relative rating within the industry

2.1.1.1 Environmental dimension

Life cycle approach

We monitor the environmental performance of a company along its entire value chain («life cycle» approach) and check it against five environmental

[7] Results of the financial analysis for selected food stocks are described in Chapter 4.

Analysis of strategy, pre-production sourcing, production processes, products and environmental management system

benchmarks (see Figure 1).
The environmental strategy needs to focus first on what happens in the pre-production phase (i.e. sourcing, suppliers), second on the actual production processes, and third, on what happens to the products and services once they are eventually delivered to the customer. For example, even the most environmentally friendly manufacturing processes are worthless if the cars produced consume twice as much fuel as vehicles built by the competition. An effective management system should ensure that environmental goals are also implemented systematically in all areas. Here too, the quality of environmental initiatives is checked and assessed against appropriate criteria and indicators. Environmental compatibility is checked at each production stage against the criteria and postulates of the WBCSD[8] (*less* energy, material intensity and toxicity, *more* revalorisation, renewable resources, durability and service intensity).

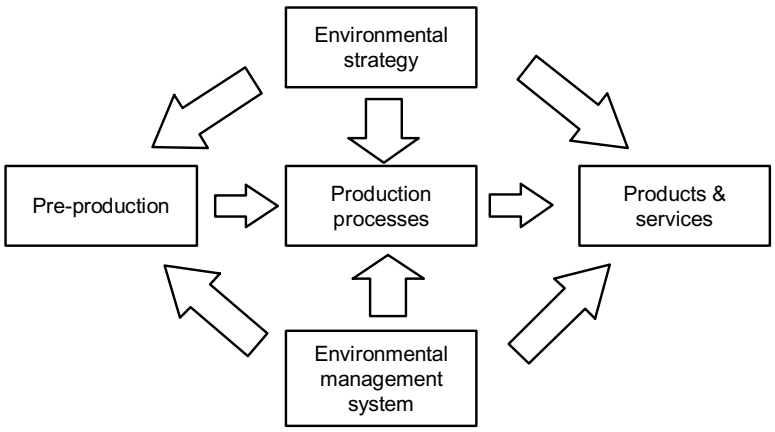

Figure 1: Environmental rating scheme based on the life cycle approach. Strategy and management must extend to all stages of the value chain.

2.1.1.2 Social dimension

Stakeholder approach: safeguarding the interests of stakeholders

The analysis of the social dimension is based on what is known as the stakeholder approach. The company's relations with the relevant stakeholders are examined and analysed in a similar way to the environmental rating, along the entire value chain (see Figure 2). The company should have a comprehensive strategy for this purpose, i.e. one that takes into consideration all the stakeholder groups. These include firstly the «upstream» stakeholders (suppliers, investors and the public), without whom it would be impossible for the company to conduct its business activity. Next come the employees, who are at the heart of the production process, and lastly the clients, to whose needs the products and services must be tailored. Competition must always be fair enough to discourage retaliatory 'warfare' that could quickly wipe out any competitive advantages.

[8] World Business Council for Sustainable Development.

A separate stakeholder management system, along the same lines as the environmental management system, is needed to systematically coordinate and foster these relations. The quality of stakeholder relations is checked and assessed against a whole range of suitable criteria and indicators.

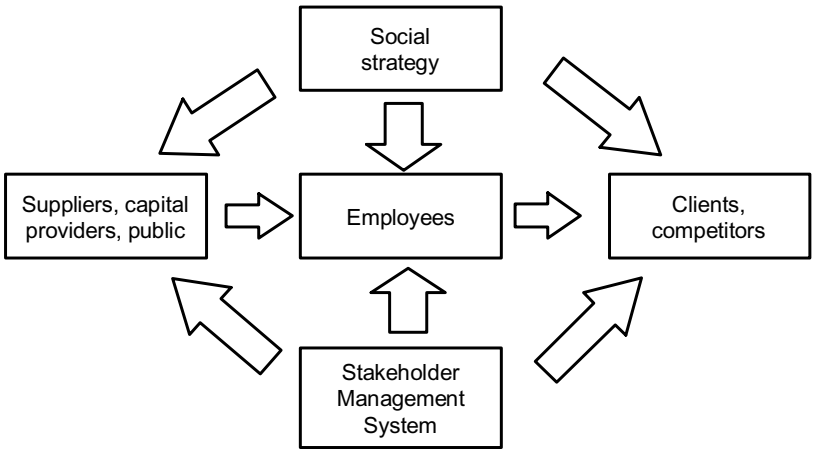

Figure 2: Scheme showing criteria for social rating based on the stakeholder approach. Strategy and management must extend to all stages of the value chain.

2.1.2 Absolute environmental and social rating of the industry

Absolute environmental rating also using WBCSD criteria

The absolute environmental relevance of a class is assessed in the same way as the relative rating described above, using the WBCSD criteria: Energy efficiency, material efficiency, toxicity etc. can also be assessed for a technology or the industry as a whole.

Absolute social rating using the stakeholder method

The absolute social relevance of a class is assessed in the same way as the relative rating within the class, i.e. using the stakeholder approach. The tobacco and alcohol industry, for example, is a threat to the health of its clients, and therefore receives a low score for its absolute social compatibility[9].

2.1.3 Overall sustainability rating

Aggregation of environmental and social compatibility into an overall sustainability rating

The absolute environmental and social compatibility scores are then aggregated. The scores are grouped into five sustainability categories: low, below average, average, above average and high. Each industry is assessed in the way it currently presents itself, not in the way that it could ideally appear. Caution is adopted when reaching an assessment: technologies with

[9] The example is chosen for illustration purposes only. If a company generates more than 5% of its sales from tobacco products, it is automatically excluded from most of Sarasin's sustainable investment funds.

small potential risks receive a higher score. The next step is to enter the absolute and relative ratings on the horizontal and vertical axes of our two-dimensional *Sarasin sustainability matrix*:

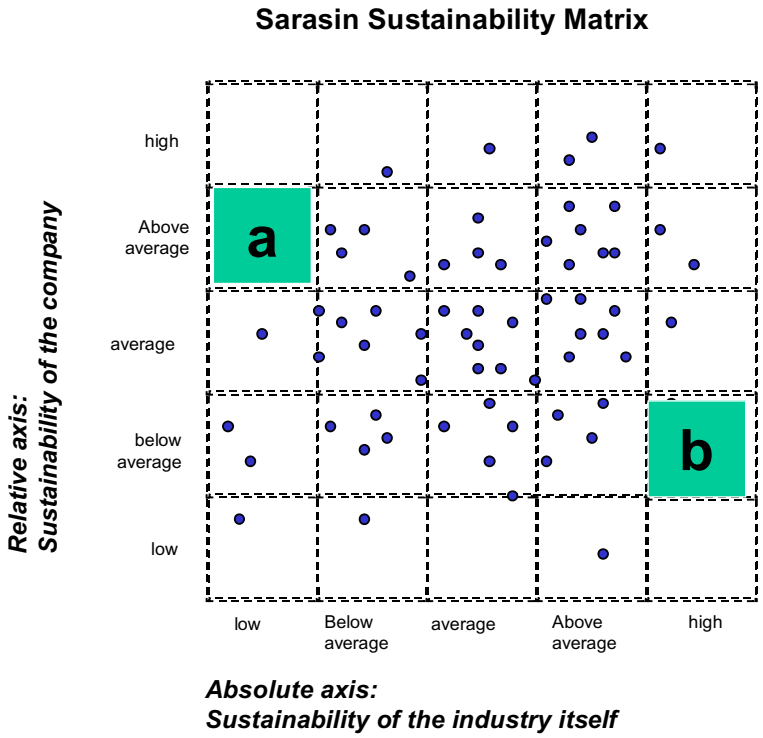

Figure 3: *Sarasin sustainability matrix*: Both relative and absolute coordinates are entered for each company. The cloud of dots symbolises an imaginary investment universe. A progressive oil company would be positioned in area a, and a below-average educational institute in area b.

2.2 Applying the methodology to the Food industry

2.2.1 Delimitation of production stages

Delimitation and definition of individual production stages

In the environmental rating, we not only need to measure the main characteristics of the Food industry against the WBSCD criteria, but also delimit the individual production stages along the entire value chain. Table 1 shows the results.

Table 1: Delimitation of the individual production stages and matching of environmental aspects with WBCSD criteria.

WBCSD criteria	*Pre-production sourcing*	*Production processes*	*Products*
Energy intensity	• Crop cultivation methods and intensity of livestock farming methods at the suppliers' end • Production of bought-in process materials and additives • Energy mix • Transport for obtaining the source materials	• Food preparation and processing methods in the factory, including processes for extending shelf life (freeze-drying, pasteurisation etc.)	• Transport and distribution of products • Storage and selling conditions (refrigeration chain, dry atmosphere etc.) • Storage and processing methods at the consumer's end (deep freeze, oven)
Material intensity	• Land cultivation methods (watering, soil preparation) at the suppliers' end • Quantity of bought-in process materials and additives • Quantity of containers and packaging materials	• Processing efficiency (input/output ratio), i.e. rejects rate • Water consumption	• Quantity and type of product packaging (environmentally friendly design, recycling ability, LCA etc.)
Toxicity	• Use of pesticides, herbicides and fertilisers in farming • Use of growth hormones in animal feed • Resistance to antibiotics by cultivation of GMO	• Emissions into the air, water and soil • Use of critical additives (catalysts etc.) • Quality of processing (registration of critical substances)	• Composition of foods (pesticide residues, antibiotics, additives). • Toxic residues from packaging materials
Revalorisation	• Fertilising methods (dung, artificial fertilisers) • Exploitation of biogas	• Recycling and waste management in own business	• Return and disposal of food past the expiry date • Return of packaging and containers
Renewable resources	• Fishing methods • Use of feed in livestock farming. Type and extent of meat production («losses» on conversion to meat products) • Manufacture and type of packaging materials used • Sustainable management of soil resources (use of fertilisers, cultivation of soil) • Biodiversity	• Use of renewable energy sources • Closed water circuits	• Natural and renewable aspects of product range (staple food, organic products, functional food, convenience food, GMO-free etc.)
Durability	No relevant issues	No relevant issues	No relevant issues
Service intensity	No relevant issues	No relevant issues	No relevant issues

2.2.2 Identifying and weighting the main environmental impacts

Agriculture's enormous environmental impact

If we consider the entire life cycle of the food manufacturing industry, the pre-production phase of farming accounts for most of the environmental impact. Every year farming consumes around 2% of the energy available to end consumers in OECD countries. The global figure is even higher, at 3%. Above all, farming is by far the biggest water consumer. Roughly two thirds of the world's fresh water consumption is in the agricultural sector. The widespread use of pesticides and fertilisers also has a high environmental impact on large expanses of land. Animal rearing and fish farming, as well as overfishing of the world's oceans, not only create the social and agricultural problems already described, but cause significant pollution as well.

Weighting of individual production steps by their relevance

Depending on their relevance, we determined ratings for the individual production stages both with respect to environmental strategy and environmental management. The weightings were used when aggregating the criteria into an overall environmental rating.

Environmental strategy	10%
Environmental management system (EMS)	10%
Pre-production sourcing	40%
Production	20%
Products and services	20%

2.2.3 Identifying the main social areas

There are different emphases in stakeholder relations as well

In assessing the social dimension too, we need to establish the most important interactions between food companies and their social environment. Food production plays a central role both from the individual perspective of the customer (food is a basic requirement) and for society as a whole (general health of the population, promoting healthy lifestyles). Nowadays customers (i.e. consumers) want transparent and extensive information about the manufacture and origin of the food they eat. Particularly the most recent scandals, such as BSE, dioxins etc., have increased consumer awareness and created correspondingly strong demand for information. On the other hand, themes such as genetic engineering and FairTrade are the subject of extensive public debate, which is one reason why relations with suppliers are becoming steadily more important. Constructive and fair relations with employees are of course very important for the food industry as well.

Weighting of individual stakeholder groups

In addition to the individual environmental criteria, we also produced weightings for relations between the food company and its stakeholder groups, as well as the social strategy and the associated management systems on the basis of their social impact.

Social strategy	10%
Social management system	10%
Public	18%
Shareholders / Corporate Governance	5%
Suppliers	13%
Employees	13%
Clients	22%
Competitors	9%

Aggregation of environmental and social ratings

To produce the final result, the individual criteria are positioned along a relative «feasibility» scale. The «feasibility» scale is inevitably an inexact benchmark and is an attempt to systematically record what is feasible for the industry as a whole. Table 1 describes the approach taken.
Environmental and social aspects were considered to be equally important for the food industry, so that each was given a weighting of 50% when calculating the overall rating.

2.3 Company selection

Multi-stage pre-selection process:

There are about 1,000 listed food companies and some 550 unlisted companies worldwide. Most important to investors are obviously those companies with the biggest market capitalisation, which is why our first step was to pick out the 25 biggest companies in terms of capitalisation. The other companies were reduced to around 300 by a technical/financial screening process (marketability, capitalisation of > USD 35m).

In the next stage we selected, on the basis of an initial rough sustainability analysis, four small and mid-cap conventional companies as well as six companies in the organic produce segment. After applying additional selection criteria (see Table 2) we narrowed down the 25 big caps to just 14 companies. We therefore analysed 24 companies in total.

Table 2: Overview of the selection criteria and non-considerations.

Selection criteria:	Non-considerations:
• The world's biggest listed food producers (by market capitalisation). • Small and mid-caps with a particularly strong commitment to environmental and social issues. • Pioneers in the area of organic and/or FairTrade food production, some of them with a share of a distribution network or own sales network.	• Substantial interests (>50%) in alcohol production and sale (Diageo, Allied Domeq, Heineken, Anheuser-Busch etc.). • Core activity (>50%) in another segment (Philip Morris[10], Procter & Gamble etc.). • Firms from food wholesale or retail (Ahold, Whole Foods Market etc.) • Restaurant, catering and fast food chains (McDonald's, Starbucks, Compass etc.).

2.3.1.1 Grouping into two clusters

Subdivision into two homogeneous groups

The pre-selection process and the analysis of the absolute environmental ratings eventually led to the formation of two relatively homogenous groups: the conventional food companies on the one hand, and the organic food and FairTrade pioneers on the other. Thanks to this grouping, we were able to assess those issues that were particularly relevant to the company in question given its general risk exposure.

«Conventional» food companies present bigger sustainability risks

The group of conventional food companies was divided into a below-average «absolute» sustainability rating in view of the uneven dimension of environmental and social impacts. In this conventional group, particular emphasis was not only placed on the systematic approach and degree of implementation of environmental and social strategies, but also on the quantitative reporting of environmental performance and any improvements made in this field. The «conventional» group comprises the companies listed below (the percentage figures in brackets refer to the proportion of total group sales generated by food in FY 2000).

CADBURY SCHWEPPES	(UK)	95%	KIKKOMAN	(J)	67%
CAMPBELL SOUP	(USA)	100%	LINDT & SPRUENGLI	(CH)	100%
COCA COLA	(USA)	100%	NESTLE	(CH)	94%
CONAGRA FOODS	(USA)	100%	NUMICO	(NL)	100%
DANISCO	(DK)	56%	ORKLA	(N)	68%
DANONE	(F)	100%	PEPSICO	(USA)	100%
GENERAL MILLS	(USA)	100%	RAISIO GROUP	(SF)	57%
H.J. HEINZ	(USA)	100%	SARA LEE CORP	(USA)	45%
KELLOGG	(USA)	100%	UNILEVER	(UK)	51%

[10] Kraft Foods, whose IPO was scheduled for June 2001, was not yet included in this report.

Organic and FairTrade pioneers benefit from a high industry rating

The second, smaller group of companies with core activities in the area of organic and FairTrade produce benefits from a better «absolute» rating on our sustainability matrix due to the specialised focus of their main business. The main criteria here were the significantly lower risks associated with more environmentally friendly farming methods, more efficient use of resources, a more socially compatible supplier structure and a transparent labelling policy. In the relative comparison of these companies we focused in particular on the exact extent of their environmental and FairTrade commitments, and the consistency of implementation (percentage of organic and FairTrade products in the entire range, degree of influence on upstream and downstream life cycle, support for environmental and social projects etc.). The pioneering group included the following companies:

GREEN MOUNTAIN COFFEE	(USA)	ODWALLA	(USA)
HAIN CELESTIAL GROUP	(USA)	UNITED NATURAL FOODS	(USA)
HORIZON ORGANIC	(USA)	WESSANEN	(NL)

2.4 Information sources

Assessment on the basis of publicly available information. Results were presented to the companies

The detailed assessment was performed primarily on the basis of publicly available information sources. This not only includes the companies' own financial, environmental and social reports, but also their homepages on the Internet, as well as independent third-party information such as press articles, announcements by NGOs etc. We also talked and corresponded with senior figures in the areas of investor relations, environmental protection and human resources. We also visited a few companies personally. As a rule the assessment is based on figures for FY 2000. The reporting date for all the information used was 30 April 2001. The results of our assessment were presented to all the companies for their own information and comments. Additional important information we received from companies during the course of the assessment process were included in the final rating.

3 Discussion of the results

Presentation of the results in two parts: environmental (production processes) and social (stakeholders)

To ensure consistency with the methodology described earlier, we provide a separate discussion of the results of our study, starting with the environmental dimension (individual production processes) and then moving on to the social dimension (stakeholder relations). We limit the discussion to the typical features of the environmental and social dimensions, as the detailed sustainability profiles of the individual companies are provided in full in the appendix to this report.

3.1 Environmental dimension

3.1.1 Environmental strategy/policy

Increasing focus on environmental issues in the public debate puts added pressure on food companies

Progress in the formulation of an environmental policy and the implementation of the resulting environmental strategies varies significantly from one food company to the next, depending mainly on the country of origin and the geographic area of activity. These geographic differences certainly depend to a large extent on how extensively green issues are debated in public, which increases pressure on companies to take a stand on environmental themes and plan appropriate activities. In this respect there has always been greater pressure on European companies. This is generally reflected in a much clearer environmental policy and a better established environmental strategy. Multinational companies in particular often tend to pursue purely opportunist strategies specific to individual countries. Their approach is therefore *reactive* rather than *active* depending on the requirements of the local market.

Unilever has issued a standard environmental commitment for all its global operations

There are examples of more consistent policies, however. **Unilever**, the Anglo-Dutch producer of food and consumer goods, has unilaterally issued an environmental commitment to meet sustainability criteria with respect to fish, water and farming. Unilever has defined concrete sustainability principles for the agricultural sector, its most important supplier. Projects have been launched worldwide to assess and monitor environmental performance on the basis of ten quantitative indicators. The indicators highlight interrelationships in farming, and allow progress to be measured in an objective fashion.

Cadbury Schweppes has had a wide-ranging environmental policy in place since 1993

Another good example is **Cadbury Schweppes**, the well-known UK drinks and confectionery group. It produces an environmental report that charts the implementation of the environmental policy it first adopted in 1993. In this document, the company defined eight core commitments to the environment, which have been used to develop a comprehensive set of environmental targets, with the introduction of a suitable measurement and control system. In particular, special emphasis has been placed on the training and involvement of all employees. This is also the reason for the higher than average rating given to the firm's environmental management system (EMS).

Sustainability is the main focus of the environmental strategy adopted by organic food companies

Producers of organic foods and FairTrade products steer a different course in their environmental strategy and policy. Wherever possible they always use naturally produced ingredients and foods that have been fairly traded for the most part. With these pioneering companies, their environmental policy and its strategic implementation do not rely on detailed EMS structures but to some extent on the intrinsic sustainable principles of their product range. As a rule these companies do not have a formalised environmental policy.

3.1.2 Environmental management systems (EMS)

ISO 14001 is also becoming established in the food industry

Most of the companies studied have introduced organisational structures and measures in order to implement the principles set down in their particular environmental policy. Since 1996 there has been an ISO Standard 14001 for Environmental Management Systems[11]. However, there are major differences in the commitment that each company shows in obtaining external certification for its EMS. Several European and Japanese companies have committed themselves to making sure all their production facilities are certified to ISO 14001 by the end of next year. By contrast, most US companies are not interested in obtaining external certification.

ISO 14001 does not provide any regulations as regards content and quantitative criteria for improving environmental performance, but simply specifies processes that are required to implement and verify goals. We have therefore deliberately attached importance to quantitative reporting on the improvement made in environmental performance. We also assessed the quality of the defined environmental targets. Figure 4 shows how successful the individual companies are in implementing their own EMS and obtaining external certification for it[12].

[11] ISO: International Organisation for Standardization, Geneva. ISO 14001 (1996) is a standard that applies to environmental management systems (EMS) that can be adopted and implemented by companies in any industry, anywhere in the world. For this EMS standard, guidelines also exist for independent certification.

[12] When assessing the companies' own EMS we had to rely on the data provided by the companies themselves. Better ratings were therefore given in cases where the EMS had been externally certified.

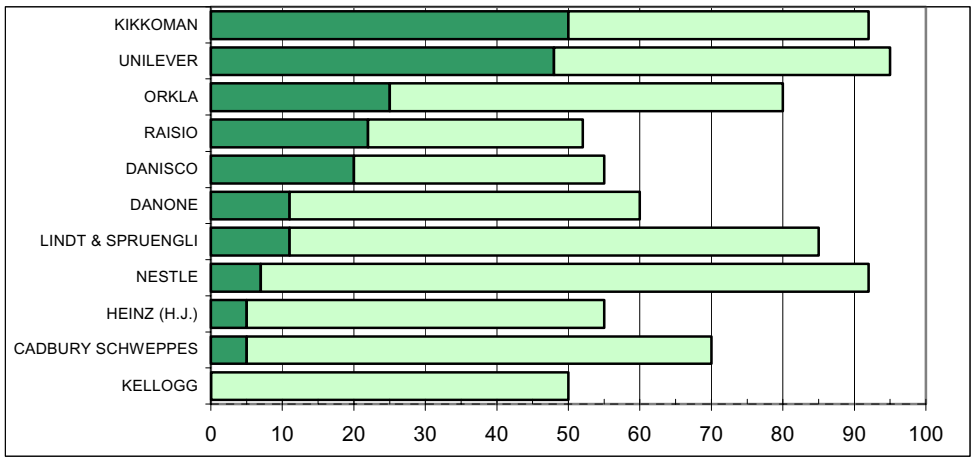

Figure 4: Percentage of ISO-certified production facilities (dark shading). The light shading shows the percentage of production facilities where environmental management systems have been implemented and are subject to internal audit, but which do *not* have external certification. Companies which do not have an EMS or which do not externally communicate environmental information are not listed.

Kikkoman is a star performer: external ISO 14001 certifications and an impressive environmental accounting system

It is not surprising to find Japan's **Kikkoman** at the top of the table of companies with the most external ISO certifications. Kikkoman is Japan's biggest and most famous producer of soy sauce, which is manufactured and marketed all over the world. Generally speaking, Japanese companies have implemented EMS more rapidly and also had them certified to ISO 14001 sooner. Kikkoman also measures and monitors the improvements it makes in this area with a highly developed system of environmental accounting and the help of specific environmental indicators. There is a profusion of statistics available on the environmental impact of the company's operations. At the moment, however, the company has still not consistently extended its environmental principles to its suppliers, a fact that is reflected in the lower than average rating Kikkoman achieves for the pre-production phase.

Orkla is continuously expanding its EMS

Orkla is Norway's biggest company and produces many brand foods and consumer goods for the Scandinavian region. Orkla has published regular environmental reports since 1996 and also has a comprehensive environmental policy that commits the company to reducing environmental effects along the entire product life cycle. The significant environmental effects and programmes have been defined and initiated for all the group's business divisions. Orkla has established a system of environmental indicators for the entire group in order to measure and control environmental impact. It has already managed substantial improvements in many areas. Further improvements are planned with the certification of its environmental management systems (so far only around 25% of the production facilities have external certification) and with the implementation of its environmental indicators.

EMS not so important for organic food companies

Since the main focus of environmental initiatives by organic food companies clearly lies in their environmentally friendly products, systematic environmental management systems do not play such a significant role as they do for conventional food companies. Environmental reports or EMAS/ISO 14001-certified environmental management systems are not common and none of the companies studied in this report have them.

3.1.3 Pre-production sourcing

Influencing agricultural production by working closely with suppliers

Looking at the life cycle of foods as a whole, agricultural production – the raw materials stage – generates the biggest environmental impact. Food companies can influence cultivation methods by imposing suitable requirements on their suppliers or may specifically pick out producers who use organic farming methods, and establish long-term relationships with them. In this context we also assess, where possible, the motives for such environmental agreements with suppliers. The approach of some companies means that «only» the requirements of the customers and markets are satisfied in a *reactive* way, while other companies take a *proactive* approach on their own initiative, driven by their convictions. This latter example of sustainable conduct obviously merits a higher sustainability rating.

Intensive livestock farming facing a crisis; food companies not facing up to their responsibilities

Most big caps are not directly involved in meat production or trading, with the exception of the increasingly important area of pet food. One exception here is the US company **Sara Lee**, which is the world's biggest producer of packaged meat products and also has its own slaughterhouses. In December 1998 the company had to cope with a serious outbreak of listeriosis in one of its meat processing plants in the US. The contamination led to at least 15 deaths and severe food poisoning in at least 100 consumers.

Most other food manufacturers involved in meat processing source their produce from wholesale meat suppliers, and to this end have only set down quality guidelines for the purchase of meat. Almost all the companies have a lot of work to do in this area. The major outbreaks of animal diseases such as scrapie, mad cow disease (BSE) and foot & mouth have provided a clear and dramatic illustration of the problems involved in modern industrial animal farming. For companies involved in meat processing, it therefore seems unwise to ignore this important area and treat it as being outside the company's own field of responsibility[13].

Fishing and fish farming methods are not sustainable

The headlines about meat production have recently diverted attention away from another area of concern: fishing and commercial fish farming. The overfishing of the world's oceans by ever more technically sophisticated trawl and long-line nets is an obvious threat to sustainability. The general assumption is that 60% of the world's commercial fish stocks are overfished. Commercial fish farming is hardly the appropriate solution to this problem:

[13] A company's responsibility does not merely extend to guaranteeing the quality of the food purchased for processing. More and more consumers are also demanding evidence of more acceptable methods of animal rearing and slaughter, such as a better quality of animal feed, humane cattle transport etc. Unfortunately only very few conventional food companies are able to provide a credible account of how they meet their responsibilities in this area.

apart from polluting the waters (eutrophication, microbic contamination), modern fish farms also tend to use hormones and antibiotics which can end up in the animal and human food chain. Recently experiments have also been carried out with genetically modified fish. It is only a matter of time before these particularly unsustainable farming methods attract public attention. It is very much in the interests of food manufacturers to protect themselves against such risks. Some of the conventional food companies do however provide a glimmer of hope in this respect:

Unilever backs the Marine Stewardship Council (MCS)

Unilever, the world's biggest buyer and processor of fish, has taken the initiative and joined forces with the WWF to form the *Marine Stewardship Council* (MSC) in 1997[14]. Since 1999 MSC has been totally independent from its two founders. The blue MSC label stands for sustainable fishing methods and limited fishing quotas. Although lack of suitable providers has meant that Unilever, co-founder of MSC, has so far only been able to source less than 5% of its produce from suppliers committed to sustainable fishing methods, the company hopes that its entire fish supplies will meet MSC standards by 2005. WWF is also giving a lot of support for MSC, as well as campaigning hard for far more reasonable fish consumption in general.

Experts from Numico personally visit their suppliers' farms

Numico, the Dutch producer of baby food, clinical food and food supplements (vitamins, herbal remedies etc.) sets extremely high quality and environmental standards for the raw materials it sources from farms. It ensures compliance with these standards in a number of ways, including regular on-site checks of suppliers' farms by its own experts.

No information on logistics

Unfortunately very little information is available on the areas of transport and logistics. This is despite the fact that transport has a significant environmental impact[15]. The use of locally sourced raw materials is therefore another area where there is room for environmental improvement[16]. Food producers should take a more proactive approach towards issues of transport and logistics. Companies who source their raw materials locally will gain a competitive advantage as soon as initiatives to internalise transport costs (fuel taxes etc.) begin to bite, if the higher costs cannot necessarily be passed on to the consumer. Better and more convincing information on logistics would therefore be welcome, particularly as far as investors are concerned. Figure 5 shows the environmental rating of the individual companies in the pre-production phase.

[14] MSC Office (International), 119 Altenburg Gardens, London SW11 1JQ, UK, www.msc.org.

[15] In some cases – especially produce originating from hotter countries in the south – produce inevitably has to be transported over long distances. This is clearly illustrated by a comparison of vegetables grown at home, in Europe or beyond. See the ETH report cited in the WWF Magazine 1/2001, in the article «Winter vegetables in season».

[16] One has to remember that it is impossible to offer regional substitutes for produce such as coffee, bananas, cocoa, tea etc.

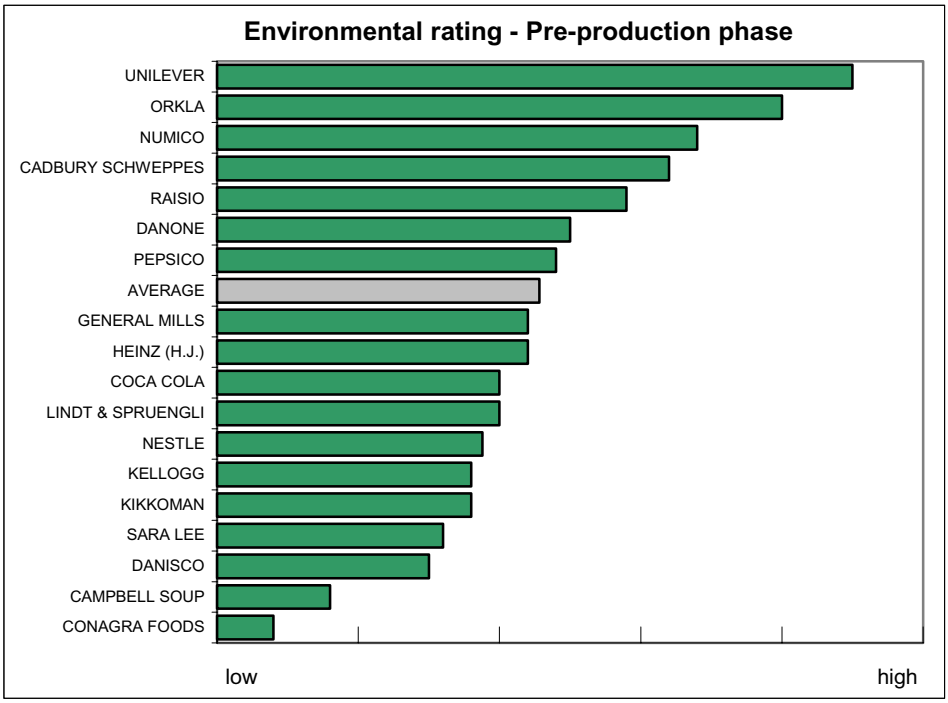

Figure 5: Environmental rating of the individual conventional food producers in the phase of pre-production sourcing.

For organic food companies, the crucial factor is organic farming methods and rigorous control of suppliers

Compared with conventional food companies, organic food producers acquire most of their raw materials from organically farmed sources. The main focus is therefore on credible controls of cultivation methods (certification) as well as checking the percentage of agricultural produce farmed strictly in accordance with organic methods as opposed to any conventional products bought in. There are, by all means, big differences within the group of organic food producers. Table 3 gives an overview of the various providers and the products they offer.

Table 3: Organic food producers and their product range, plus the proportion of organic products as a percentage of total sales).

Company	***Product range***	***% of organic products***
Horizon Organic (USA)	Organic milk and dairy products	100
Green Mountain Coffee (USA)	Organic coffee	80
United Natural Foods (USA)	Natural foods	> 75
Hain Celestial Group (USA)	Natural foods and tea	> 50
Odwalla (USA)	Freshly squeezed juices and assorted muesli bars	< 50
Wessanen (NL)	In future only natural foods and food supplements; currently still 50% dairy products	< 50

United Natural Foods supports farmers who want to switch to organic methods

In the US, **United Natural Foods,** the country's biggest distributor of organic products, has always played a key role in the industry. This company is the most important link between smaller regional and local organic food producers and farmers on the one hand and the big chains of healthfood stores such as Whole Foods Market and Wild Oats. It offers an exemplary support programme for producers who wish to switch to organic farming methods. This is particularly important, as the transitional period is especially difficult for most producers.

3.1.4 Production processes

Major environmental initiatives undertaken in-house, but US companies still lag far behind

Most companies have achieved substantial progress as regards the environmental impact of their own production processes. As Table 4 shows, nine companies publish their key environmental indicators. A direct comparison of each company's environmental indicators is only possible to a limited extent, however, as the methods used to record them vary, and each company also has a different product mix. More important for determining individual ratings was the percentage improvement achieved by each company over the years.

Unilever, Nestlé, Kikkoman and **Lindt & Sprüngli**, for example, are able to demonstrate the improvements they have made in their eco-efficiency with environmental indicators stretching back over several years. The advantages of such improvements are obvious: greater eco-efficiency helps companies to save hard cash and also avoids potential penalties (energy costs, waste disposal charges and wastewater fees etc.).

Table 4: Various environmental indicators for in-house production. The figures relate to the reporting year 1999.

	Water consumption [m^3/t product]	Energy consumption [m^3/t product]	CO_2 emissions [kg/t product]
Cadbury Schweppes [1]	**5.6**	**2.6**	**112**
Danone [2]	**7.2**	**2.2**	**n.a.**
H.J. Heinz	**8.2**	**0.6** [3]	**n.a.**
Kikkoman (soy sauce)	**11.5**	**2.8**	**213**
Lindt & Sprüngli [4]	**5.6**	**8.3**	**n.a.**
Nestlé	**8.6**	**3.7**	**197**
Orkla (drinks)	**4.8**	**1.9**	**67**
Raisio [5]	**1.5**	**1.2**	**14**
Unilever	**6.1**	**2.4**	**208**

[1] Figures for 1997 [2] Figures for 1998 [3] Only electricity consumption [4] Aachen location
[5] Figures refer to raw material input; n.a.: these data were not published.

As far as the quantity of environmental reporting is concerned, there are substantial geographical differences: European and Japanese food companies are well ahead of their US counterparts when it comes to production optimisation. Because their environmental management systems are more developed, the Europeans and Japanese can also trim their production processes to eco-efficiency in a more systematic way. The Americans, on the other hand, are only able to provide sparse quantitative data on their production processes. Most of the information concentrates on purely qualitative goals, and success is measured mainly by referring to a few (and not particularly meaningful) case studies or examples. As far as production processes are concerned, the US food companies studied therefore have the worst environmental ratings compared with the sector as a whole.

For some years now, Unilever has been using eco-efficiency ratings to measure its environmental performance

Once again **Unilever** is the pick of the bunch. The company produces a set of six eco-efficiency ratings to assess performance in the production phase for its entire global production facilities: waste water emissions, special waste, harmless waste, water consumption, CO_2 and SO_2 emissions. We can see a continuous improvement in these figures since 1995. CO_2 emissions per product unit, for example, have been reduced by 16% over the last 6 years. The COD[17] load in the wastewater has fallen by as much as 30%. The company also publishes target values that it intends to achieve by the year 2004.

Nestlé records environmental indicators for about 90% of its production facilities

In its first comprehensive environmental report for the year 2000, **Nestlé** publishes ten environmental indicators, with both absolute and relative values for the past three years. According to the company, these data cover more than 90% of its 509 production facilities worldwide.

Organic food producers show fewer systematic improvements

With organic food producers, there generally tends to be fewer systematic improvements in eco-efficiency measures as far as their in-house production processes are concerned. This is regrettable but hardly surprising, as the tools to achieve this – namely the implementation of environmental management systems – are not seen as a priority in this product-centric sector.
Even so, some companies have introduced concrete measures to improve eco-efficiency in production. **Green Mountain Coffee**, the niche producer of organic coffee in the US, has installed a waste heat recycling system in its roasting plant. **United Natural Foods** has improved the eco-efficiency of its office and its waste recycling. **Wessanen**, the Dutch company which plans to concentrate fully on the manufacture and sale of organic products in future, is considering using the latest environmental technology in its production facilities.

[17] COD – Chemical Oxygen Demand, a standard measure for determining the level of pollution in wastewater.

3.1.5 Products

Large companies behave in an «opportunist» way and only offer organic products on a regional basis

Only a few conventional food companies offer organic products, and even then these offerings are limited to specific regions. This is an attempt to satisfy different demand patterns in individual national markets, or to meet the demands of specific consumer groups. In Germany, for example, only organic baby foods are currently being marketed, as non-organic baby foods are just not selling any more[18]!

This situation is typical for most conventional food companies: they do react to changed demand patterns – albeit with some delay – but only in very few cases do they show a clear commitment to actively promote organic products. However, there are a number of exceptions:

General Mills and H.J. Heinz have bought smaller organic food companies

General Mills and **H.J. Heinz** are unusual in the active approach they take to organic products. In January 2000, General Mills, a big US company that sells breakfast cereals, yoghurt, snacks and drinks, purchased the small organic company Small Planet Foods whose well-established brands include *Cascadian Farms* and *Muir Glen*. At present these branded products only contribute about 1% to the group sales of General Mills.

H.J. Heinz, famous for its tomato ketchup, acquired a 20% stake in the Hain-Celestial Group last year, which we analyse separately in this study in the group of organic food producers. In the UK, H.J. Heinz also purchased the popular Vegetarian product line *Linda McCartney.*

Unfortunately, packaging is no longer a major environmental issue

In recent years, packaging for food products has been continuously improved with the help of environmental audits. Various tools and extensive data were produced on this issue, and the information was also made available to smaller companies. Now the trend towards optimisation of packaging unfortunately appears to be in decline. Packaging design apparently seems to be firmly in the hands of marketing specialists again, and consumer pressure for more environmentally friendly packaging has eased off. Food companies place greater emphasis on the customer's needs (quality of food, aesthetics etc.) than on potential improvements in environmental protection.

The main exceptions are initiatives undertaken by **Unilever**, **Orkla**, **Kikkoman**, **Danone** and **Nestlé**, all of whom have at least in part introduced impressive measures to optimise product packaging. For US companies such as **ConAgra Foods**, **Sara Lee** and **Campbell Soup,** however, optimisation of packaging does not appear to be an issue. Once again, there is an enormous gap here between geographical regions.

Economic pressure to optimise distribution is not very great

The trend towards increasingly bigger and more efficient production plants means that products have to be distributed over increasingly greater distances. In addition, the pressure from retailers to provide «just-in-time» delivery of goods makes it more difficult to avoid empty loads. So far this does not appear to have had any negative economic impact. From the

[18] The big providers are being forced to follow trends instigated by smaller, innovative companies such as Hipp, which is not even listed on the stock market.

sustainability perspective, however, the increase in volumes being transported by road and rail create mounting traffic and social problems.

Both Raisio and Nestlé have interesting approaches

However, some companies have already introduced interesting initiatives to reduce transport volumes. **Raisio**, a Finnish food producer of cereals, margarine, vegetable oils and feed for farm animals, has managed to optimise the distribution of products by introducing organisational measures («round-trip transport») and being judicious in its selection of production location. **Nestlé**, on the other hand, uses special software to ensure that its products can be loaded onto standard palettes in the optimal way. 250 rather bulky product lines have now been optimised using this tool. Figure 6 provides an overview of which company is making the greatest efforts to minimise the environmental impacts of its products.

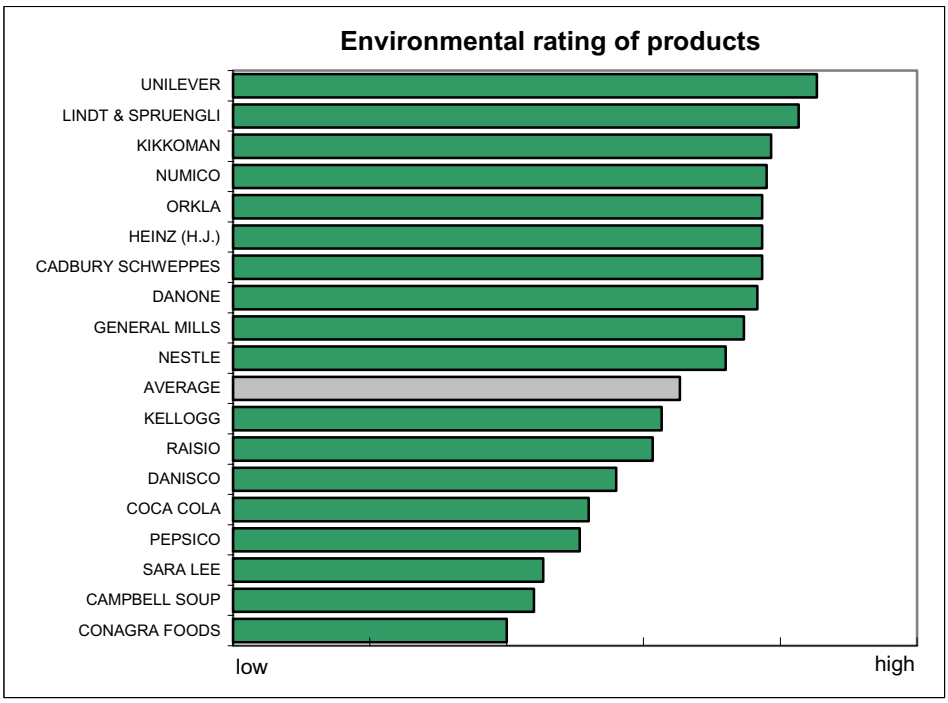

Figure 6: Environmental rating of the individual conventional food companies in the «Products & Services» phase.

Organic and FairTrade products have an advantage

In contrast to conventional food producers, the organic food producers examined in this study identify themselves mainly through the production and sale of organic and FairTrade products. One positive effect is that such a fundamental decision has a helpful influence on all the upstream life cycles, because the production methods used are more environmentally friendly. The decision to sell organic products also tends to mean that local seasonal products are offered, thereby reducing the amount of transport and refrigeration, while environmentally damaging product packaging is avoided. Organic products also present very few risks as far as their ingredients are concerned (i.e. they do not contain GMOs, artificial additives etc.). The relevant product range of these companies is listed in Table 3.

3.2 Social dimension

3.2.1 Stakeholder management strategy

Erratic management of stakeholder relations

Generally the standard of reporting and systematic support of relations with individual stakeholder groups within the food industry is even patchier than the reporting provided on the environmental side. Some companies do however provide systematic support for good relations with the public and with consumers. Only a few companies recognise that transparency and openness in information policy are the best way of protecting themselves against nasty surprises and unexpected reactions on the part of stakeholders (e.g. consumer boycotts).

3.2.2 Customers

Customers are the most important stakeholder group for the food industry

Customers and consumers are the most important stakeholder groups for companies in the food industry. On the one hand, purchase decisions give consumers substantial market power which companies simply cannot ignore. On the other hand, they eat the produce made by the food companies and are therefore «at their mercy» to some extent as regards the quality of the ingredients used. This close relationship (not to mention increasingly tougher product liability laws) inevitably places an enormous burden of responsibility on food companies. The latest series of food scandals have only served to highlight just how uncertain consumers are and how they feel exposed to health risks which in some cases are not fully understood.

Transparent and informative product declaration is best

Some improvements have been made in recent years in the transparency and information content of product declarations. For the consumer's sake, the food industry must strive to ensure a comprehensive and intelligible declaration concerning the ingredients, country of origin, cultivation methods etc. for all products. In this respect companies should comply with various requirements imposed by national legislation. But companies are free to provide more information than they are legally obliged to.

Seamless quality assurance is required for the entire product life cycle

In times of such uncertainty, there is a vital need for a properly developed quality management system that consistently monitors the quality of raw materials and processing methods over the product's entire life cycle and takes customers' fears seriously. In what follows we focus on the GMO issue, which in many respects is typical for the sort of problems facing the food industry.

Consumers want to be fully informed about all the issues surrounding GMO products

In this context our main concern was not so much genetic engineering per se, but how the company approached this topic in dealings with its stakeholder groups[19]. In particular, we therefore tried to establish whether

[19] Environmental aspects such as biodiversity, reduced use of insecticides and fungicides etc. also play an important role in assessing the use of GMOs. However, these aspects were not included in our assessment of the environmental rating, because of the disputed scientific basis.

companies publish a clear policy for the use of GMOs that is valid for the entire group[20].

Only a few companies have adopted GMO guidelines that apply to the entire group

With the exception of **Lindt & Sprüngli**, **Orkla**, **Cadbury Schweppes**, **Raisio** and **H.J. Heinz**, most conventional food companies *do not have a self-imposed global ban* on the use of GMOs. Most companies take an openly opportunist approach, i.e. they do not use GMO ingredients where public opposition and customer concerns are too great. Furthermore, there are enormous differences between companies not only as regards the transparency and communication of individual policies on GMOs, but also on the labelling of products.

Lindt & Sprüngli consistently avoids GMO ingredients

Lindt & Sprüngli, for example, has a policy of not using GMO ingredients in its chocolate and other products. Extensive controls ensure that critical products, such as soya lecithin, are tested for possible traces of GMOs – not just by asking all suppliers to provide a certificate to this effect, but also by testing samples in specialised laboratories. Obviously this sort of control mechanism offers a major advantage also in terms of the general quality assurance of products, which clients ought to appreciate.

Japanese consumers demand high product quality

Kikkoman's main production plants are all certified to ISO 9001 standard and ensure a consistently high level of product quality – compatible with the rigorous demands of Japanese consumers. Demand for the company's organic soy sauce, which is GMO-free, is growing steadily, although Kikkoman also markets conventional soy sauce that does contain GMOs. The information provided on the origin of the raw materials and the production methods used is very detailed and available to all customers.

Quality problems lead to health scares for consumers

By contrast, other companies such as **Coca-Cola, Pepsi Cola, Sara Lee,** and **ConAgra Foods** have had major problems in the past with the quality of their products (contamination of Coke in Belgium, contaminated meat products in the USA, contamination of drinking water in New York State and the recall of cereal products containing StarLink maize)[21]. Apart from the obvious failure or lack of suitable quality management systems, the poor information policy of these companies has certainly not done anything to help overcome these crises. More importantly, the companies mentioned actually refuse to discuss the use of GMOs in their products (Coca-Cola, Pepsi) or make no comments at all on this issue (ConAgra Foods and Sara Lee).

[20] In our assessment we drew not only on the standard sources available to us, but also on a survey on this topic conducted by *Friends of the Earth UK* in the summer of 2000 on all the major food companies. Friends of the Earth Europe, London, GMO Foods Survey, July 2000; www.foe.co.uk.

[21] StarLink is a genetically modified type of maize developed by Aventis, which has only been approved for use in cattle fodder and is not fit for human consumption.

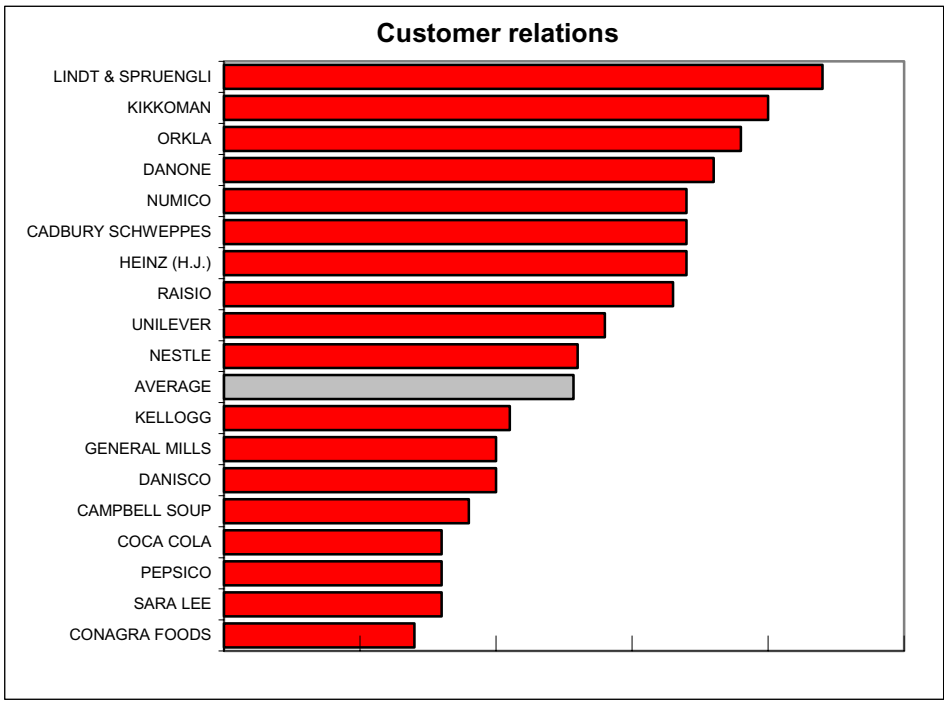

Figure 7: Relative rating of customer relations for the individual companies in the conventional food industry.

Situation regarding GMOs is totally different for the organic food companies

The GMO problem is completely different in the case of the second group, organic food producers: all the companies studied have a global ban on the use of genetically modified organisms. With these companies, therefore, we tried to assess how credibly and systematically they review and control compliance with this self-imposed ban.

In fact an unproblematic supply of GMO-free products was not always automatically guaranteed, as certain multinational firms in the agribusiness argued for a long time whether it was at all possible to keep the two different harvests separate without incurring enormous overheads, especially in the case of soya products.

3.2.3 Suppliers

FairTrade is still not an issue for big food companies

Conventional food companies seem to be a little reluctant to take on FairTrade issues. The companies continue to procure most of their raw materials from the global commodities markets. This is not an ideal situation as far as sustainability is concerned, as the negotiating power of producers from southern hemisphere countries in commodities markets (which tend to be extremely volatile) is usually much too weak due to structural reasons. The supply and purchase commitments made in FairTrade agreements carry their own inherent drawbacks and risks[22]. As long as these risks are

[22] There are many potential risks that impede access to FairTrade agreements and the monitoring of FairTrade quality: the danger of defending monocultural cultivation structures, tensions when supply

minimised by suitably defined framework conditions, FairTrade agreements can strengthen producers' position and chances. At the same time they make consumers more aware of the impact of their purchase decisions. On the consumer side there is certainly solid demand for FairTrade products, that is enjoying above-average growth. Overall we therefore rate due consideration of FairTrade sources in the purchase of raw materials as a sustainable form of supplier relations.

Cadbury Schweppes: criticism of child labour in West Africa

Just how important such supplier relations can be for food companies is shown in the harsh criticism of the chocolate industry following reports about child labour and forced labour on the cocoa plantations of the Ivory Coast. This country supplies 40% of global demand. The Ivory Coast government is aware of the problem, which mainly concerns young immigrants from Mali. These accusations took **Cadbury Schweppes** completely by surprise, and the damage to their image was «pre-programmed». The company has responded to criticism, however, and now plans to link up with the English chocolate manufacturers' association to improve work conditions and also perform regular checks.

Danone's Code of Conduct governs relations with suppliers

Other companies are far more proactive in avoiding such problems. **Danone**, for example, adopted a business policy in 1997 which focuses on collaboration with suppliers and regulates it in an exemplary fashion. Its social report published in 1999 provides several informative case studies in this area: support for small companies, training of suppliers in matters such as assuring the quality of raw materials etc.

Numico pays regular visits to its suppliers' farms

Numico's excellent record in this area is one of the main reasons for its good environmental rating in the pre-production phase. This rating reflects Numico's impressive initiative to perform an integrated assessment of its suppliers' performance in the areas of the environment, quality, safety and hygiene in an effort to ensure they are compatible as much as possible with its own programme in these fields. To this end, Numico fosters long-term relationships with selected suppliers who are able to meet the defined criteria.

Figure 8 provides an overview of our findings regarding the quality of supplier relations.

problems are caused by erratic harvests (recourse to non-FairTrade products), danger of favouritism and corruption.

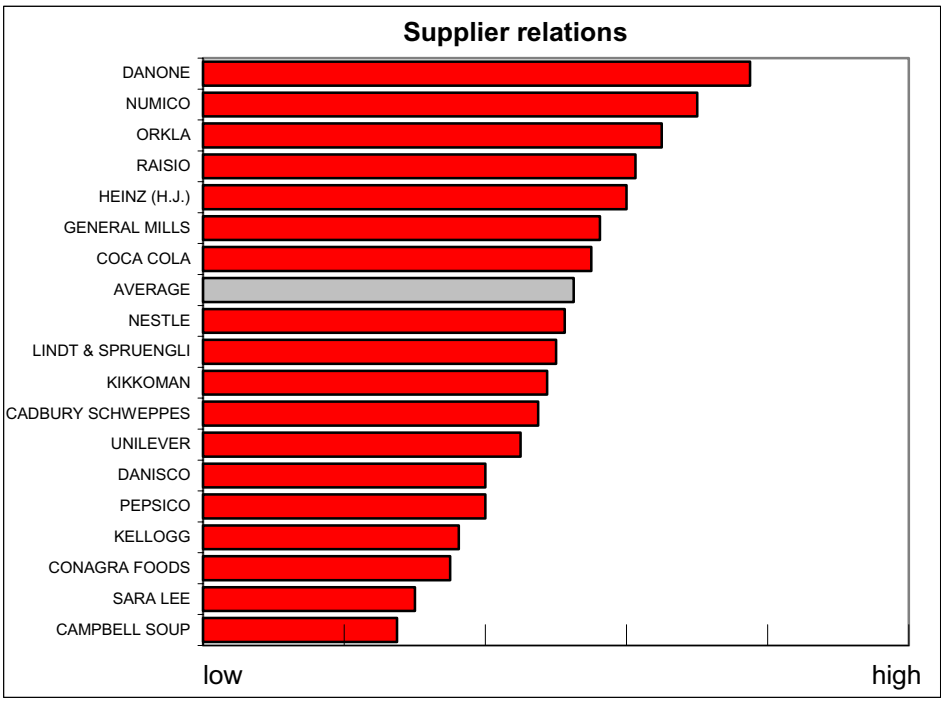

Figure 8: Relative rating of supplier relations for the individual companies in the conventional food industry.

Organic food companies focus on FairTrade

In contrast to conventional food companies, FairTrade criteria have always played an important role for companies in the organic food produce segment. FairTrade simply means that producers in developing countries are guaranteed a «fair» price for their products. A number of independent organisations have built up purchasing and distribution networks for FairTrade purposes, and companies can slot into these as they wish. By engaging in this trade, as well as in concrete projects in the Third World, companies from industrialised nations that want to purchase and market products from developing countries play an important role in the sustainable development of the countries of origin.

Green Mountain Coffee cooperates with TransFair

As a coffee buyer, for example, **Green Mountain Coffee** cooperates with TransFair USA. This international FairTrade network supports 300 cooperatives comprising some 550,000 farmers and their families in 20 countries in Latin America, Asia and Africa. Farmers can usually more than double their income through such a cooperation. Long-term agreements are made with purchasing and price guarantees. In addition various projects have also been launched to support coffee growers' communes. Smallholders in Sumatra were given support to set up a certified organic coffee growing cooperative. This coop now supplies more than 500 tonnes of organic Arabica beans, roughly equivalent to 17% of the entire FairTrade organic coffee imported into the USA.

Good supplier relations in their home countries as well

Apart from FairTrade, we also assess relations with suppliers in the companies' own home countries, as many organic products come from regional sources. **Horizon Organic**, the leading US company for organic dairy products, has for example committed itself to making a contribution to preserving family businesses in rural communities. The dairy cooperatives and independent dairies that supply products to Horizon now number over 125 small businesses. The company also purchases organic animal feed for its own farms and other supplements from another 500 family-owned businesses.

3.2.4 Public relations (corporate citizenship)

Social responsibility is a more important issue for North American companies

For once, North American companies seem to be ahead of the Europeans when it comes to social responsibility. Virtually all the US food companies have set up their own social *foundations*. In the US, society traditionally relies very heavily on support from private industry for tasks that tend to be undertaken by the state in Europe. These foundations finance charitable projects or channel voluntary donations (e.g. *Second Harvest*[23]).

Kellogg, for example, spends more than 3% of its pre-tax profit on benevolent causes, making it the biggest benefactor of all US food companies. The other US companies spend 0.5%-1.5% of their pre-tax profits on good causes.

***Unilever** is an excellent communicator and can manage crises*

But social responsibility is not just limited to charitable donations. General relations with the public, particularly open information about the company's own activities are just as important for the social dimension of sustainability. **Unilever** is the best when it comes to transparency of information and openness of communication. It is the only company to provide comprehensive information about the environmental and social aspects of its activities in a separate environmental and social report. Problematic issues are dealt with in a pro-active way. Unilever also has good crisis management skills. When a critical situation arose in a thermometer factory in India in which Greenpeace found out that the groupwide policy governing the disposal of waste metals had not been fully enforced, Unilever's response was fast and effective, and the necessary improvements were made immediately.

***Orkla** has clear anti-corruption guidelines for its Eastern European business*

Certain companies also take a proactive approach towards new threats and introduce suitable measures. Finland's **Orkla**, for example, has issued clear guidelines and principles for its business activities in Eastern Europe, specifically to try and prevent corruption and dealings with criminal organisations.

[23] America's Second Harvest solicits donated food and grocery products from the nation's food and grocery industry and distributes it to hungry people across America. Growers, manufacturers, distributors, and retailers all support America's Second Harvest through donations of surplus food that might otherwise go to waste were it not for the effective distribution channel provided by the America's Second Harvest network. www.secondharvest.org.

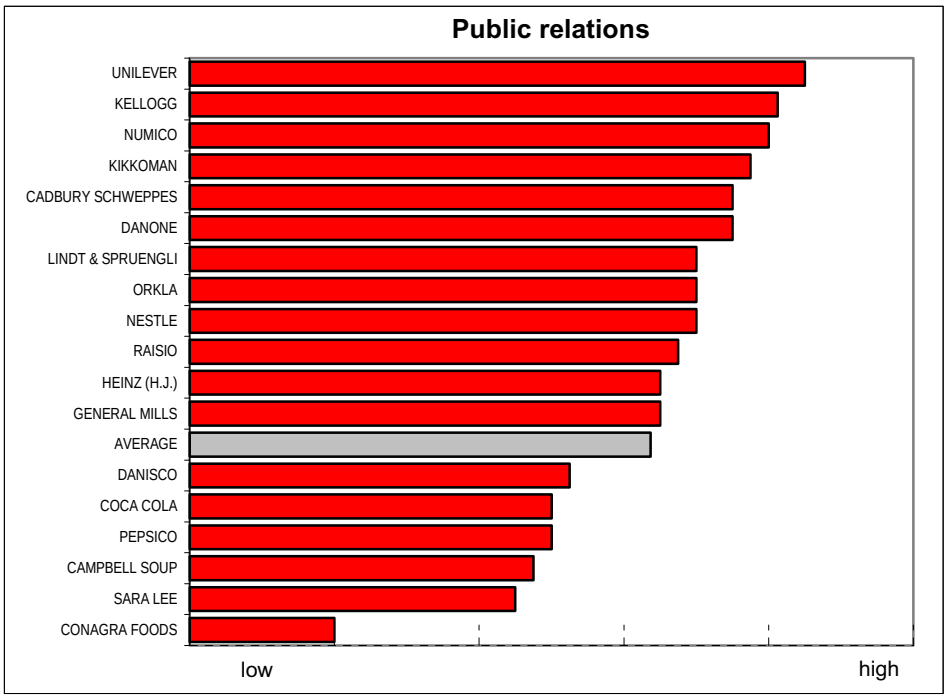

Figure 9: Relative rating of public relations for the individual companies in the conventional food industry.

Organic food companies are also committed

Obviously the big food companies are more exposed to public opinion than organic food producers and FairTrade companies, which inevitably enjoy more public goodwill. Once again, however, the active involvement in public relations of such companies must have a positive impact on our social rating, especially since they assume a model role in the area of sustainability.

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Green Mountain Coffee, for example, supports a wide range of community programmes not just in coffee-producing countries, but also in the USA. The company spends more than 5% of its pre-tax profits on charitable organisations. The efforts of **United Natural Foods** in calling for transparent labelling laws in the area of GMO foods is also beneficial to society, because such new legislation for clear labelling would be crucial for a more consumer-friendly policy in the USA.

3.2.5 Employees

Shift towards non-OECD countries likely

True to its reputation as a defensive sector, one of the main features of the food industry in the past has been its low rate of staff turnover. However, headcounts are likely to be reduced as the wave of mergers and acquisitions continues. Future growth and new jobs are likely to be concentrated in areas where demand grows at a dynamic pace, i.e. in non-OECD countries. From a social perspective, extra attention therefore needs to be paid to the monitoring of work conditions. The companies need to make active

preparations for these developments. Unfortunately, reporting on the quality of employee relations often tends to be poor.

Kikkoman offers excellent social benefits to its employees

One of the best examples of good employee relations is certainly the programme that **Kikkoman** offers to employees in Japan. These relations are very close and geared towards the long term, as befits Japanese tradition. The company also offers special better than average career development programmes, provides access to its company-owned hospitals not just to its employees, but to their families and the local population, and also provides additional impressive social benefits.

***Lindt & Sprüngli** offers good employment conditions and encourages worker participation*

Lindt & Sprüngli stands out especially for its above-average work conditions and employee benefits. Here it is fair to say that the employees certainly benefit from working in Switzerland, where wages are generally high. But its foreign production facilities also offer exceptionally good work conditions, including worker participation in company decisions. The various members sitting on the works councils of all the European subsidiaries meet once a year, where they have the chance to voice employees' concerns and formulate their objectives. The company set up these works councils at a very early stage, even though it had no legal obligation to do so.

Cadbury Schweppes has a comprehensive personnel policy

Cadbury Schweppes has adopted a comprehensive personnel policy which goes beyond the provisions usually made in the sector. Extensive information is also supplied, and the media has repeatedly praised the company's personnel management skills in recent years. The company particularly excels in areas such as equal opportunities, pension benefits, share participation schemes, training, worker participation and cooperation with trade unions.

Danone's restructuring is creating a lot of waves in France

Danone is a prime example of how an exceptionally transparent communication process and supportive measures still do not make a company immune to public criticism. The company's announcement at the end of March of plans to restructure its Biscuit Division caused a storm of protest from trade unions and the media. This has happened despite the fact that Danone has assured the employees and communities affected of its full support with finding other jobs, retraining, financial assistance, early retirement etc. and has agreed to meet with employee representatives to discuss the most socially acceptable solution for each country. The implementation period specified (by 2004) is also relatively generous. This case shows that the assessment of social relations must also take into account the particular cultural background. In the USA a far more heavy-handed approach would have caused much less of an uproar, while in France the restructuring programme has definitely had a negative effect on the quality of employee relations and their motivation.

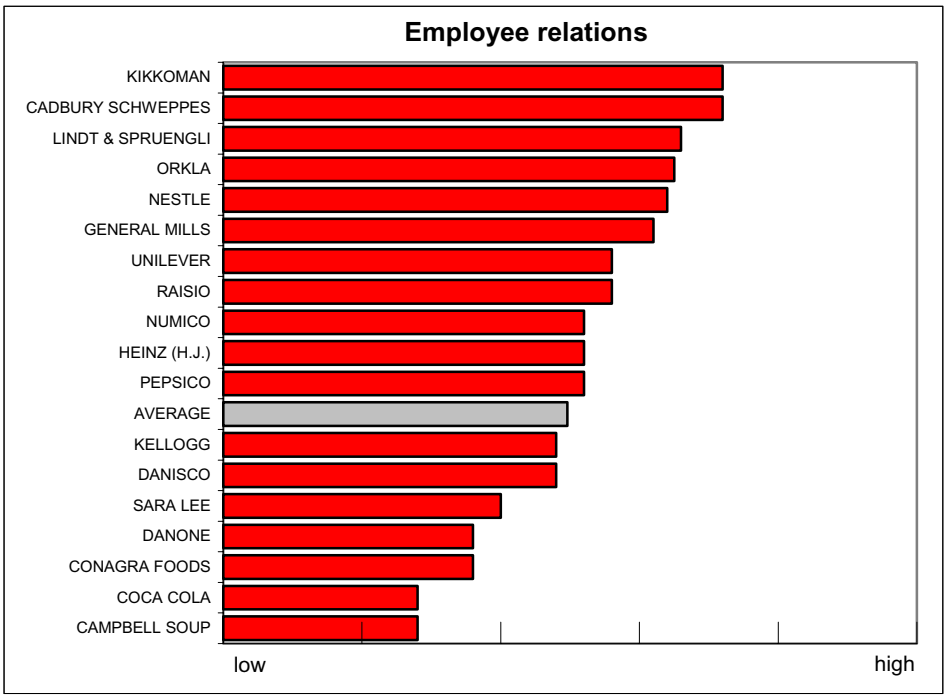


Figure 10: Relative rating of employee relations for the individual companies in the conventional food industry.

Employees working for organic food companies tend to be more committed and motivated

Employees working for organic food companies generally seem to be more committed and motivated. The companies' core activity is explicitly geared towards high environmental and social benchmarks, and employees are often proud of being able to work for these companies. This makes it much easier to recruit potential staff. These companies also tend to offer greater opportunities for worker participation as well as sharing in the firms' profits or share capital. Ongoing professional training is also a priority, as employees must be able to identify with the products and the underlying principles.

Green Mountain Coffee employees train in Costa Rica

At **Green Mountain Coffee**, for example, about a dozen of the 400 employees are allowed to travel to Costa Rica to spend time on a coffee plantation to gain first-hand experience of growing coffee. In addition, the company makes an environmental award to an outstanding employee every year.

3.2.6 Competitors

Tough competition between the big players, while the smaller firms and organic food companies stick to niche markets

Competition in the food industry is extremely fierce. The most famous example of this is the battle that **Coca-Cola** and **PepsiCo** have been waging over several decades for the dominance of the cola and lemonade market. Consolidation of the industry is set to continue in future, maintaining pressure on smaller companies especially. Companies are responding to the situation with different strategies. On the one hand they are consciously seeking joint ventures with competitors (e.g. **General Mills** and **Nestlé**) or they occupy

market niches or focus on special product qualities, which makes it more difficult for the bigger players to squeeze them out of the market (e.g. **Lindt & Sprüngli**). All the companies in the second group of organic produce are currently pursuing this niche policy. Competition is far less intense here (at the moment) and the companies have more capacity free for operational management tasks.

3.2.7 Shareholders (corporate governance)

Financial reporting usually excellent, but...

The financial reporting of virtually all the companies is extremely transparent. The discussion of share price performance and the acquisitions made occupy a prominent place in the annual reports of most companies, while non-financial issues of the type examined in this report tend to be put in second place. The Anglo-Dutch **Unilever** and British **Cadbury Schweppes** receive a higher than average rating in this field, because of the strict legal criteria regarding corporate governance. With other companies less priority is given to corporate governance principles.

...the «one share – one vote» rule is frequently ignored, while the positions of CEO and Chairman are still not separated

For example, companies like **Lindt & Sprüngli** and **Raisio** have different share categories carrying different voting powers. Although this is legal, it violates the more transparent principle of «one share - one vote» that is so revered in the Anglo-Saxon business world. The overlapping of management and supervisory functions within the company (*Board of Executives, Board of Directors*), which can be problematical, does not usually occur that often. On the other hand, it unfortunately tends to be the rule rather than the exception to find one person combining the role of Chief Executive Officer and Chairman of the Board, a situation that should be avoided as far as corporate governance is concerned, as it prevents power sharing and makes company controls more difficult.

Minority shareholders can submit proposals on social and environmental issues

At the AGMs of the three US companies **General Mills, PepsiCo** and **Coca-Cola** votes were held on proposals from minority shareholders concerning special environmental and social issues (ban on GMO ingredients, improvement of recycling management and the introduction of a social standard in accordance with SA-8000[24]). In fact the proposals in question were rejected on the recommendation of the Board of Administration – which says a lot about the strategic direction of these companies – and was therefore included in the relevant part of our assessment. From a shareholder's viewpoint, however, it is at least a positive sign that such awkward proposals can even be put on the agenda, forcing both management and the supervisory board to make their position clear.

[24] SA-8000: a standard for social responsibility drawn up by the Council on Economic Priorities Accreditation Agency (CEPAA), now renamed Social Accountability International (SAI).

3.3 Combining the social and environmental dimension

Combining the results of environmental and social analysis to produce an overall sustainability rating

The final step was to produce an overall sustainability rating by combining the results of our analyses of the environmental aspects described (strategy, EMS, pre-production sourcing, production processes, products) and of the individual stakeholder groups using the weightings specified in section 2.2.2 and 2.2.3. Then we positioned the companies on the Sarasin sustainability matrix (Figure 11) depending on their relative weighting within their sector and the sustainability of the industry itself.

Unilever was the only conventional food company to achieve a «high» sustainability rating. Five companies (Orkla, Numico, Cadbury Schweppes, Lindt & Sprüngli and Kikkoman) achieved higher than average ratings, seven average (Raisio, Danone, H.J. Heinz, Nestlé, General Mills, Danisco and Kellogg), and four below average (PepsiCo, Coca-Cola, Sara Lee, ConAgra Foods), while one company only managed a «low» rating (Campbell Soup).

In the organic food company group, only one company achieved a high sustainability rating: America's Horizon Organic. United Nature and Green Mountain Coffee were rated higher than average, United Natural Foods, Hain-Celestial Group and Odwalla average, and Wessanen below average.

Results show a regional pattern: European and Japanese companies did better

The results of our sustainability analysis show a typical geographical pattern for conventional food companies. One obvious point is that most US companies do worse than their European and Japanese counterparts. Of the North Americans, only General Mills and H.J. Heinz achieved an average rating, mainly because of their better than average social profile and certain initiatives in the area of organic products.

No such geographical patterns exist for the organic food companies. On the one hand the comparison group is not sufficiently distributed across different countries. On the other, the strategic focus of their business activity on organic and FairTrade products seems to eclipse any cultural differences.

Relevant for investors

As far as the exact positioning of the companies on the matrix is concerned, there appear to be differences within these rating categories that are purely mathematical, as clearly shown in Figure 11, but such a degree of differentiation is hardly relevant to investors. As a result, the ratings for the company sustainability profiles contained in the annex only specify the group in which the company belongs.

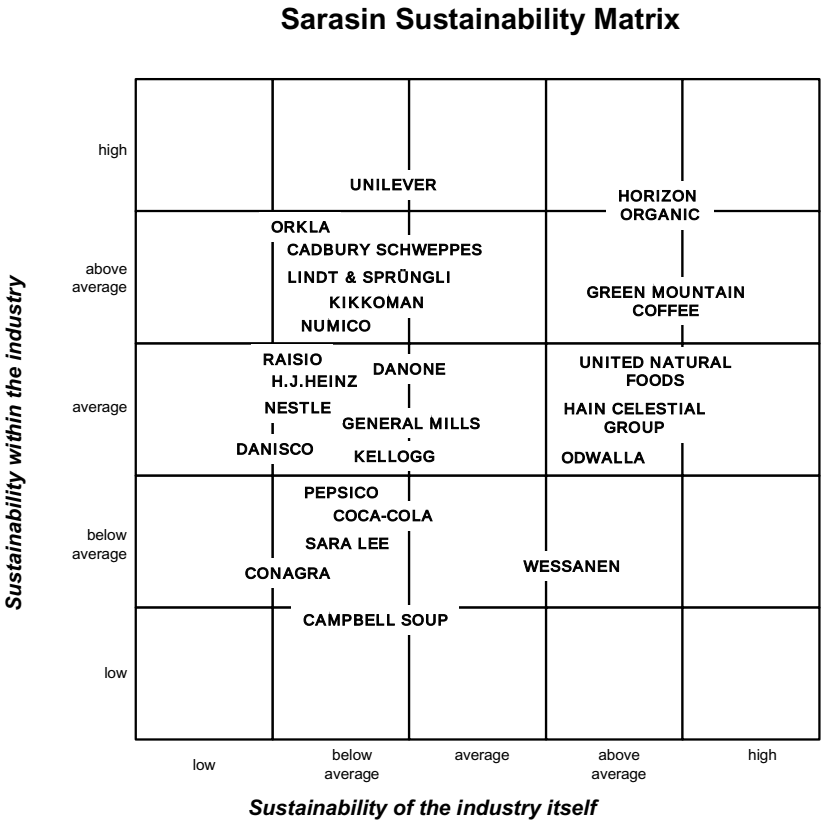


Figure 11: Position of the companies studied on the Sarasin sustainability matrix.

4 Financial analysis of the industry and selected companies

Attractive investments through defensive character paired with growth opportunities

Investments in food producers are not only lucrative in times of stock market volatility, but also when markets are more bullish. The food industry promises new growth opportunities and therefore offers an attractive combination for investors: on the one hand this defensive business, which is not very sensitive to economic cycles, boasts steady sales and profit growth (albeit on a modest scale) while at the same time escalating demand for healthy foods (organic and functional food) promises exciting new growth potential. In what follows we focus on those companies with a higher than average sustainability rating, which we also consider to be more attractive from a financial analysis perspective.

Unilever

Focus on 400 Top Brands

The Anglo-Dutch Group **Unilever** is on schedule with its restructuring plan that was initiated back in 1999. The main aims of its EUR 5 billion «Path to Growth» programme for greater efficiency is to reduce the number of brands from 1600 to 400, cut production facilities from 385 to 280, and trim the workforce from 250,000 to 225,000. It intends to achieve this primarily by selling off certain business activities and brands. Other elements of the programme include the restructuring of the global Unilever organisation, optimisation of the value chain through more extensive international procurement, more efficient production and distribution, as well as the incorporation of new marketing channels and a stronger focus on the interests of the consumer. Concentration on the top brands is proving to be a successful strategy. In FY 2000 the sales growth of the 400 top brands (excluding the main acquisitions) rose steadily from 2.9% in the first quarter to 4.9% in the fourth. Thanks to the ongoing restructuring program, the gross margin (operating margin before exceptional expenses) rose from 11.2% to a record level of 12.1%. This brings the company one step closer to meeting its five-year target of increasing organic sales growth to 5% and achieving a profit margin of 16%. Earnings growth per share should come to at least 10% a year. In parallel with its sales drive, Unilever also began to wage a real acquisitions offensive in the spring of 2000. The most spectacular of its 20 acquisitions was the US producer of diet products, Slimfast, the cult US ice-cream brand Ben & Jerry's, and the purchase of Bestfoods, whose products include the world's biggest food brand Knorr and whose annual sales growth rate of 4% make it one of the most dynamic and profitable producers in the food industry.

2002 to 2005 average EPS increase of 14% p.a.

The strategy Unilever has adopted has proven to be successful. The integration of Bestfoods and other acquired companies is well advanced and the sales of non-core businesses as good as completed, as confirmed by the Q1 2001 figures. The company should therefore be able to meet most of its targets. Since Unilever generates about 38% of its sales in Europe (the acquisition of Bestfoods has not substantially changed the geographic sales spread) and only 25% in the USA, the Group should not be too severely affected by the downturn in the US economy. In any case, this can be offset by the high sales growth in emerging markets. One proviso here, however, is that the crisis in Argentina does not spread to the whole of Latin America, where Unilever generates 12% of its sales. At the moment Argentina only accounts for 1% of group sales. Over the period 2002 to 2005 we expect earnings per share to grow by 14% p.a. on average. All the conditions are in place for this to be possible.

Cadbury Schweppes

Attractive acquisitions in the high margin beverage market

Cadbury Schweppes, the British producer of beverages and confectionery (sales contribution 50% each, profit contribution 60% and 40% respectively) pursues a growth strategy through acquisitions. Other interesting opportunities should arise from the ongoing consolidation of the soft drinks market, which is why this higher-margin business will in future become more important than the confectionery side. Recently Cadbury Schweppes acquired well-known soft drink brand names in the USA (Snapple), France (Hollywood) and Australia (Lion Nathan). After 12 months of negotiations, Cadbury eventually completed the acquisition of the soft drinks business of Pernod Ricard, whose core brands include Orangina and Pampryl fruit juices. With one stroke, this purchase has made Cadbury Schweppes one of the most important soft drinks producers in France, the third biggest market in Europe. All these recent acquisitions are a good strategic fit and can be financed without any major difficulty. Even the purchase of Orangina, despite being relatively expensive, should contribute to group profit even in the first full financial year. Expected synergy effects of around EUR 20m should cover the acquisition costs. We think that Cadbury Schweppes is capable of meeting its double-digit growth targets in future. In the past it has always managed to do so, but mainly as a result of efficiency improvements and strong cash flow generation, and to a lesser extent through sales growth. These efficiency targets – particularly in the confectionery business – were achieved at the cost of innovation. Future growth must be fuelled by product innovation, because no further substantial improvement in efficiency can be expected and the UK market is saturated. Even so, the company managed to hold on to its lead position in the stagnant UK chocolate market, with a market share of 28% ahead of Nestlé and Mars. Otherwise its confectionery business has expanded in most other markets, with the notable exception of the UK.

Cadbury Schweppes is a well managed company with a high level of cash generation, which in the past has also been sensibly invested, but its rate of organic growth is only modest. Particularly in view of the current economic environment, we do not expect to see a substantial volume expansion. Nevertheless, the company should achieve double-digit EPS growth for the current year. We think Cadbury will manage to achieve acquisition-led growth more in the soft drinks business, as this offers much higher margins (12%-28% versus 5%-9% for confectionery) and the mid-term market growth prospects are estimated at 5%, which is also higher than confectionery's 2% forecast. In the current volatile stock market environment, well-managed companies that can boast 10% profit growth are a good investment. Furthermore Cadbury Schweppes (unlike Unilever, Nestlé or Danone) has no activities in Latin America, and would therefore be unaffected if the Argentinean crisis spread to the entire continent.

Lindt & Sprüngli

High quality paired with rapid innovations

The strategy adopted by the new management of **Lindt & Sprüngli** in 1993 – geographical expansion, strong brand leadership and innovation – has been a success, with sales growth higher than average since then and more efficient production also producing disproportionately high profit growth as well. This is the result of ongoing initiatives and the assumption of substantial business risks. Despite this transformation process, one thing has stayed the same at L&S: the outright focus on the highest quality segment within the industry. Other changes include a greater willingness to make major strategic acquisitions, a wider geographical expansion (seen as too difficult in the past), as well as a breathtaking pace of innovation, with the positioning as a premium brand not proving to be incompatible with innovation, but actually conducive to it, as long as the underlying quality of production and marketing is right. In European markets, whose key features are generally stagnant growth and the dominance of powerful wholesalers, growth is only possible if companies manage to launch consistently innovative products onto the market. With 20 new products a year, L&S is capable of achieving organic growth of between 5% and 7% p.a. L&S currently runs a well-balanced and efficient business, as last year's figures prove. Organic sales growth of 6.7% was higher than the market average, which indicates a further expansion of market share. Today L&S has a far better international diversification than just a few years back, with the US market providing the lion's share of group sales and a reduction in the dominance of the three long-established markets of Switzerland, Germany and France to less than 50% of total sales. With further cuts in personnel costs and productivity improvements, the Group still managed to increase its operating profit in line with targets, despite a rise in marketing expenses, and also improved its net margin despite a deterioration in the financial result and higher exceptional costs.

Fancy stock with solid growth

L&S shares provide investors with their only opportunity of participating specifically in the growth of the global market for up-market chocolate. Its competitors are either part of a conglomerate or in private hands. With a price/earnings ratio of 22 the shares are not valued too high, particularly if one considers that the company offers a pretty strong assurance for double-digit profit growth (the current year has started very well) and consistent dividend growth in a very volatile stock market environment.

Functional Foods

Food industry meets limits in home markets; functional foods as a growth market

Food companies are generally optimistic about existing and future growth opportunities, so the sector is likely to remain attractive even after its strong performance in the past. The food producers who are currently global and regional market leaders started off life in industrialised countries, which is where they grew to their current size. But for some time now they have been facing saturation in their home markets. Population growth is at its lowest in these regions, and demographic trends such as the ageing of the population and healthier eating habits are also most pronounced. Food products that are developed at enormous cost and geared to increasingly specific consumer requirements therefore offer a welcome source of growth and

enormous potential if correctly marketed. Most new food products being launched at present are in the area of «functional food», i.e. foods containing enriched products that are supposed to promote good health, offer certain medical benefits or are designed to prevent illness in a natural way. None of the leading companies has been able to escape this trend, or has indeed wanted to.

Numico

Successful transformation into a functional foods producer

With its disposal of its Drinks division in March 2001, Numico completed its transformation from what was originally purely a dairy products supplier into the world's biggest producer of vitamin preparations, baby foods and food additives. With this restructuring, Numico has repositioned itself in the US market as a Life Science producer over the past year, particularly with its three major acquisitions of the vitamin producers General Nutrition Companies (GNC), Rexall Sundown and Enrich. This has not only brought a change to the product range, but also meant that the lion's share of business has now shifted to the USA. The group already generates 60% of its sales, which in 2000 rocketed 84% to EUR 4.2bn (primarily as a result of acquisitions), in the USA. Even so, the Numico Group should not be too badly affected by the weakness of the US economy in the current year, because it commands an excellent position in this market. A number of competitors who are substantially smaller than Numico are likely to experience problems, and this will be to Numico's advantage. With a US market share of 26%, Numico already controls a dominant position in a heavily fragmented market. Further acquisitions in the US in the area of food additives cannot be ruled out. In addition, several hundred new sales outlets for GNC's vitamin products are due to open. Furthermore, the entire product range will in future be marketed in Europe as well, where the market is far less saturated than in the USA.

A take-over candidate?

For the full 2001 financial year Numico expects US sales growth to reach the upper double digits, with profit growth of at least 15%. After Numico shed a quarter of its market capitalisation in the past six months (the share price is currently around EUR 45 after hitting a peak of EUR 62 at the end of November 2000), a take-over by a rival (not just other food producers, but drug companies may be eyeing the company) cannot be ruled out, particularly since Numico does not want to remain independent at all costs. With a price/earnings ratio of 13 for the coming year the shares are attractively valued compared with its peers.

Organic Foods

Growth market organic foods

Although the organic foods industry is no longer in its infancy, it is still a long way from being mature. Its growth rates are roughly ten times higher than traditional food companies, i.e. between 10% and 20% p.a. These attractive growth rates have attracted the attention of traditional food producers, who are now also trying to break into this segment as quickly as possible. Meanwhile, organic food companies are trying to break into conventional distribution channels as well.

Horizon Organic

«Happy Cow»: Horizon Organic's blue ribbon winner

Horizon Organic is certainly increasingly able to sell its organic dairy products in conventional food shops (43% of US sales in 2000), a development which has substantially expanded its potential client base. US consumers are increasingly unsettled by food scares and environmental issues, and are much more aware about health issues surrounding food. The brand name «Happy Cow», which has already won a good reputation with consumers, has already been successfully extended to market other new products and product categories, i.e. not just dairy products such as cheese, yoghurt or butter, but also other organic foods such as fruit juices. In June 2000, Horizon Organic bought the leading producer of organic dairy products in the UK, where Horizon previously only had a weak presence in organic yoghurt. A three-phase restructuring and integration program is currently under way in the UK, designed to reduce overheads, use resources more effectively and tap into new sales channels, including raising the brand awareness for «Happy Cow». In Q1 2001 sales already rose 30%, and the direct supply projects with its marketing partner Sainsbury's was successfully launched recently. First quarter 2001 figures for the group as a whole showed sales growth of 43% to USD 38m, but an overall loss due to substantially higher taxes of USD 235,000. This figure was actually lower than expected, and derived from the UK acquisition. Business was better than expected in the US in particular, thanks to the very successful launch of long-life milk in 2000, which already makes up 39% of the entire US milk sales.

Estimated earnings growth above 30% p.a.

We believe that Horizon Organic can now exploit excellent growth opportunities in the UK as well by introducing new products, tapping into new sales channels and launching Horizon branded products. The company is well positioned as a leading supplier of organically produced fresh produce in the USA and now has a growing international presence as well. During almost ten years of trading it has demonstrated a flair for entrepreneurial activity and generating profit. We expect solid sales and profit growth in both the USA and the UK. Long-term (3-5 year) earnings growth is estimated at 30% p.a., which translates to a p/e ratio of just over 20 in 2002, which is in line with its industry peers and is on the low side for a growth stock.

Sustainability Rating and Performance

Out performance of companies classified as sustainable

Our simulated performance calculations over three and five years show that an investment in food producers with good sustainability ratings does pay off[25]. The share prices of «conventional» food producers with a higher than average sustainability rating have risen by 80% over the last five years, while the share prices of companies with average or below average ratings have advanced barely 26%. Over the same period the MSCI World Index rose 40%, while the MSCI Food, Beverage & Tobacco subindex managed a gain of 24% (figure 12). The picture over three years is the same as 5-year

[25] Source: Datastream, daily prices in USD from 17.7.1996 (-5 years) and from 17.7.1998 (-3 years) to 17.7.2001; for United Natural Foods the time series starts on 1.11.96 (IPO) and for Horizon Organic on 2.7.98; all stocks were given the same weighting.

performance, with the share prices of sustainable companies rising by 11%, while those with lower ratings dropped as much as 24%, compared with a 5% fall in the MSCI World and a 15% drop in MSCI Food. On average the more sustainable group not only shows a higher level of innovation in its products, but for some years has also demonstrated a considerably stronger commitment to environmental and social issues.

The performance data of organic food companies show a similar picture, i.e. once again the share prices of the group with the higher sustainable rating did much better (+450% over 5 years, +432% over 3 years) than companies with a poorer sustainability record (+243% and +10% respectively, see figure 13). It should be noted, however, that the data volume is too small to allow a representative statement, i.e. the figures need to be treated with caution and are certainly unsuitable for extrapolation into the future. The performance of the latter group was also achieved at a considerably higher risk (high volatility).

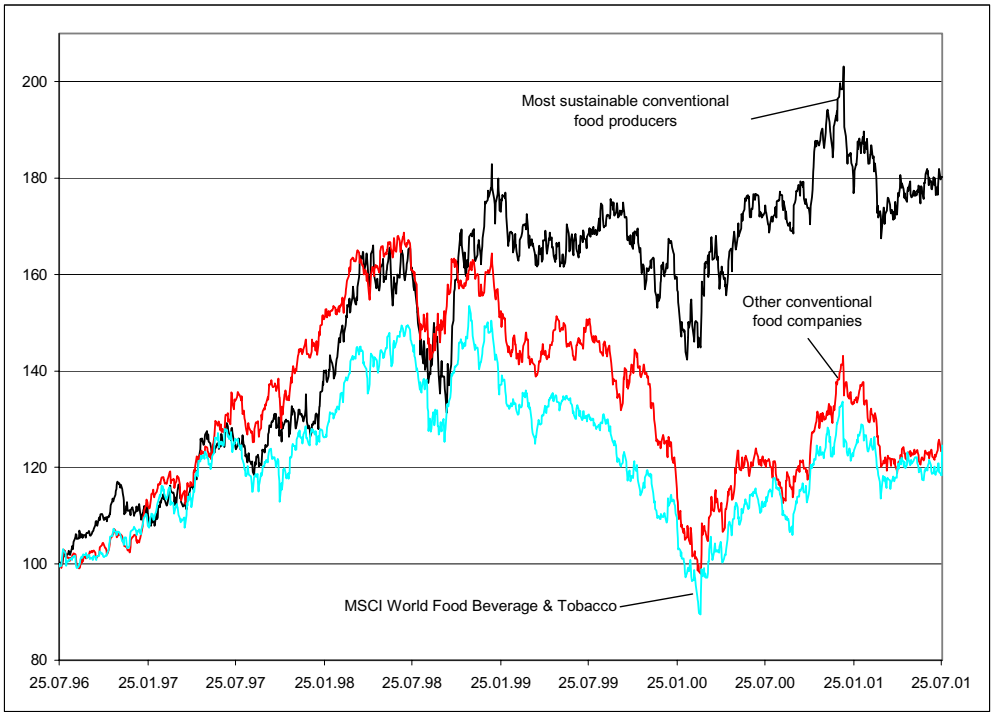


Figure 12: 5 year «Backtracking» of the most sustainable conventional food companies compared with the rest of the conventional food producers and the MSCI subindex Food, Beverage & Tobacco.

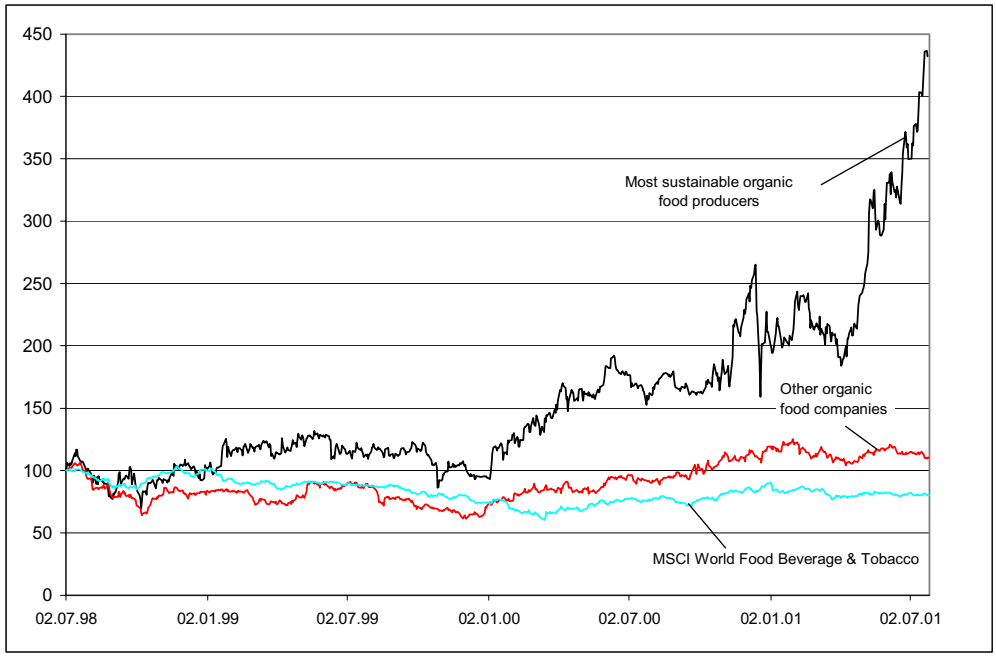


Figure 13: 3 year «Backtracking» of the most sustainable organic food producers versus the rest of this group and the MSCI subindex Food, Beverage & Tobacco.

Annex: Sustainability profiles of three selected companies

The annex contains the sustainability profiles of three selected companies examined in our study. The profiles are a summary of the analysis results, broken down by company. The bar charts show the relevant company's performance in the environmental and social dimension (top bar) compared with the average for the study group as a whole (bottom bar). The written commentaries[26] briefly outline our assessment of the company as far as its environmental and social compatibility is concerned. Obviously only the most important points can be discussed here. Differences in the ranking cannot therefore be fully explained purely on the basis of the brief commentaries we provide by way of summary.

The «industry average» is therefore the average of the selected group of companies studied

It should be noted that the group studied in this report was limited to a selection made on the basis of the methods described previously. This is particularly important when attempting to compare the environmental and social performance of a company with the «industry average». This is obviously not the average of *all* companies in the food industry, but the average of the *pre-selected* food companies. The real average of the entire food sector is therefore most probably overestimated. We believe, however, that only comparing the most progressive companies in an industry with each other is quite compatible with an active and positive investment approach.

[26] Commentaries in the sustainability profiles were written in English and presented in this form to the companies for their information.

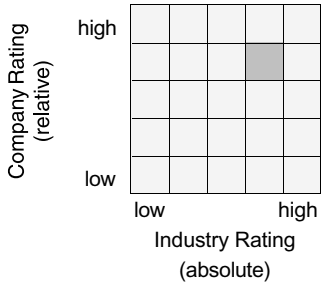
A complete set of sustainability profiles of all the food companies studies can be ordered at Bank Sarasin in Basel (Order address on the last but one page).

Green Mountain Coffee

SARASIN

Sustainability Profile

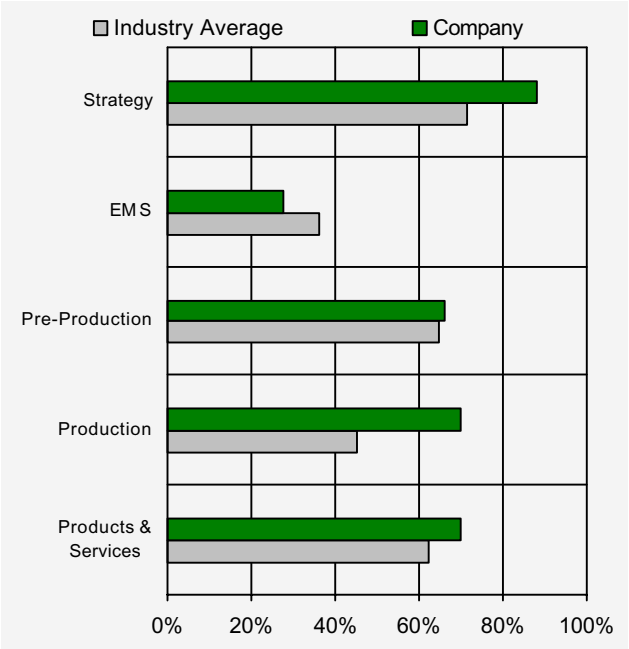
Industry:	Organic Foods
Revenue:	84 Mio USD
Year:	2000
No. of employees:	444
Web:	www.greenmountaincoffee.com
Country:	USA



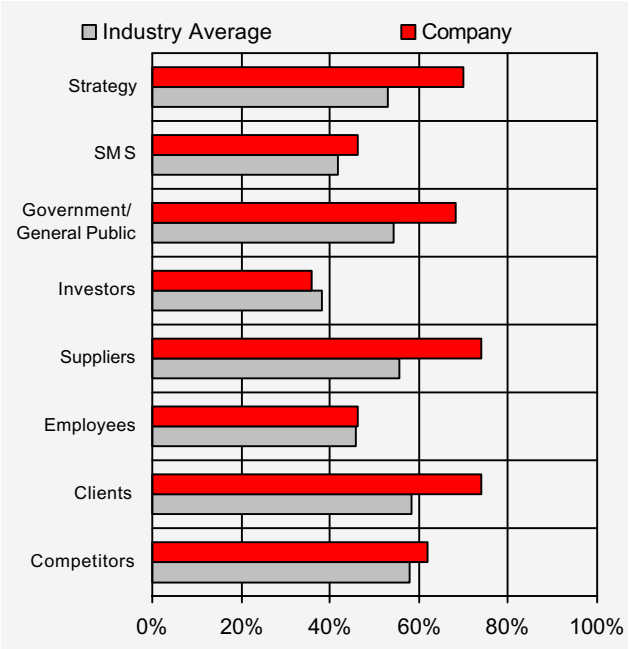
Business Activities

Green Mountain Coffee (GMCR) purchases and roasts over 25 high-quality Arabica coffee beans and distributes over 60 varieties of the roasted coffee primarily in the northeastern United States. The Company's main operation is wholesaling of coffee and it serves more than 6000 wholesale customers. It became publicly held in September 1993. Wholesale coffee operations accounted for 95% of fiscal 2000 revenues and directmail operations, 5%.

Environmental Profile



Social Profile



Comments

GMCR purchases about 25% of its coffee from selected farms and cooperatives. The company has introduced a first certified organic coffee in 1986. In 1989 an internal environmental committee was founded. The company strives to minimise environmental impacts through responsible operational practices from supply over its own production processes and to waste management. On its roasting site it has installed a cogeneration plant to reuse the surplus heat. GMCR s production waste is mostly recycled. Therefore it is collected in 12 different categories. It has also developed a 100% biodegradable package.

Green Mountain Coffee has a strong and long commitment to environmental and social responsibility and spent more than 5% of its pre-tax income in 2000 to non-profit organisations in the U.S. and in coffee-producing countries. Furthermore, GMCR has signed an agreement with TransFair USA to promote Fair Trade coffee. This increases the product quality and also has a positive impact on the living and working conditions of the farm workers and families. The company won several awards recognizing the passion for excellence and abilities to execute well. The wholesale customers are educated about origin/preparation of coffee through on-site training, manuals and experiences known as "Coffee College".

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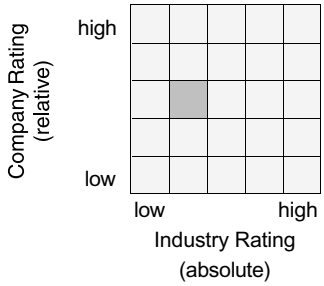
Kellogg

SARASIN

Sustainability Profile

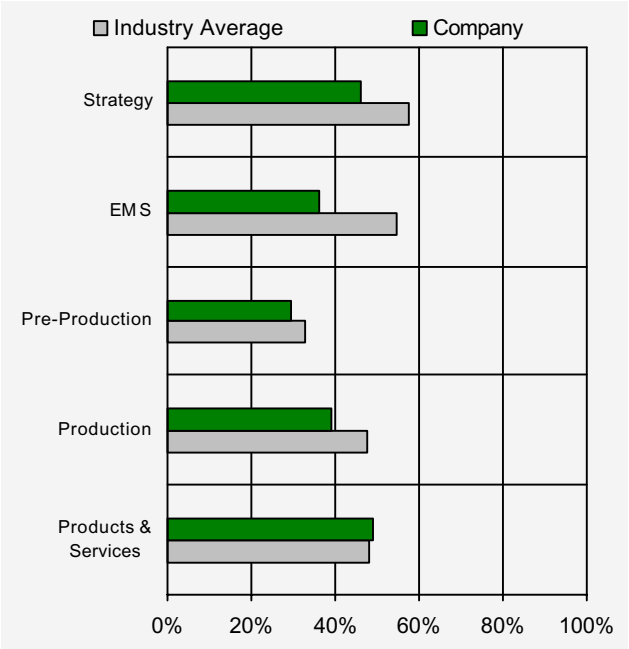
Industry:	Food & Beverage
Revenue:	6'955 Mio USD
Year:	2000
No. of employees:	15'200
Web:	www.kelloggs.com
Country:	USA



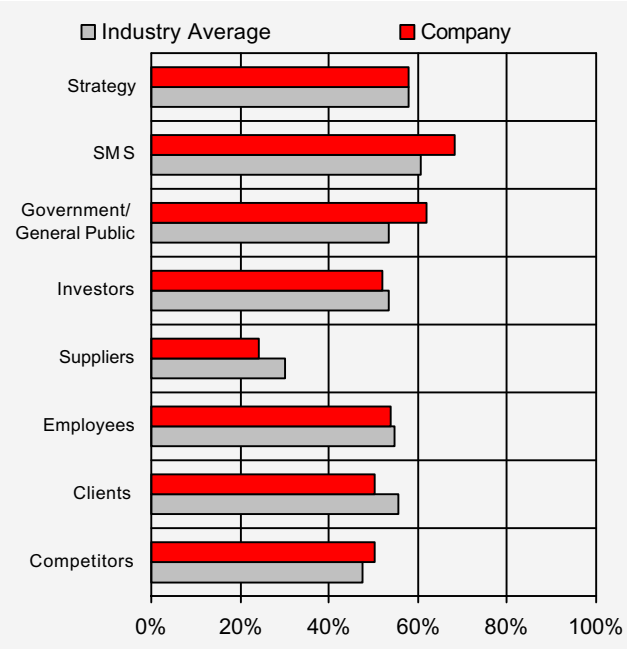
Business Activities

Kellogg manufactures and markets ready-to-eat cereal (74% of 2000 sales) and other grain-based convenience food products (26%). The company's products are marketed under trademarks such as Kellogg's, Rice Krispies, Nutra-Grain, etc. Kellogg manufactures its products in 19 countries and markets them in over 160. 2000 sales were distributed to 58% in the US, 21% Europe, 9% Latin America and 12 % others. In March 2001 the acquisition of Keebler Foods was completed and this will increase sales by 40%.

Environmental Profile



Social Profile



Comments

Kellogg's has an environmental policy and also claims to run an audit program and to enter the findings into a common environmental database. However, a structured EMS with clear objectives is missing and so is evidence of concrete eco-efficiency measures in its production. The information disclosed is limited for a corporation of this public presence. The acquired Keebler Company's environmental activities have also not been pro-active, presenting an additional challenge. It should be noted, that Kellogg's main product range (cereals) is generally associated with lower impacts over the entire life cycle.

Kellogg's code of conduct includes consumer satisfaction, integrity, ethics and social responsibility. In 2000, the Kellogg Foundation donated 3.7% (USD 35 Mio) of its operating profit. Kellogg offers good employee benefits and is committed to being an equal opportunity employer. Its advertising policy incorporates ethical standards. Nonetheless, it is not always clear to what standards Kellogg adheres in which country. GM ingredients are not used in Europe and Kellogg is seeking non-GM sources for other markets. Practices in the US are less clear cut. The Board of Directors also opposed a shareholder proposal having an independent third party monitor Kellogg's worldwide compliance with human rights standards.

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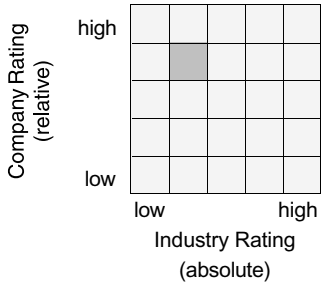
Kikkoman

SARASIN

Sustainability Profile

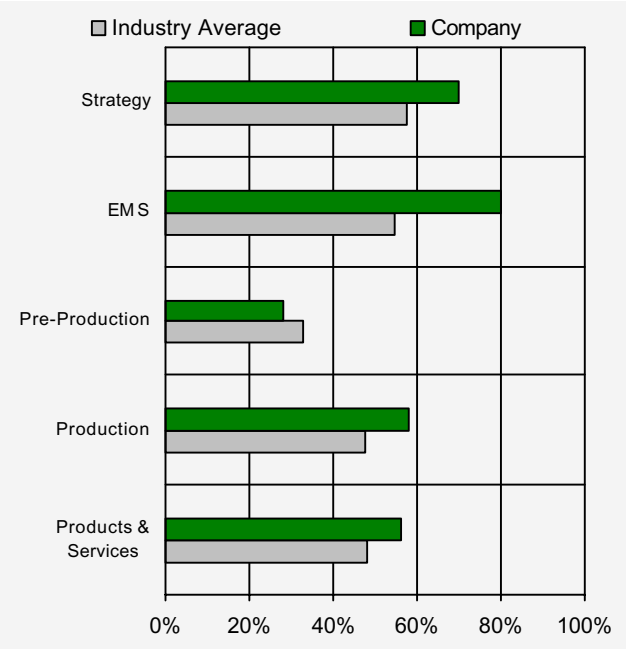
Industry:	Food & Beverage
Revenue:	136 Bio JPY
Year:	2000
No. of employees:	2'781
Web:	www.kikkoman.com
Country:	Japan



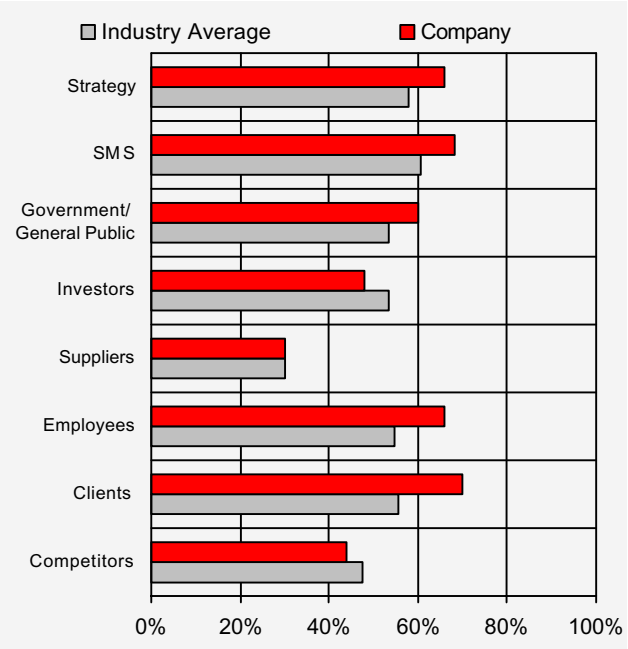
Business Activities

Kikkoman Corporation is the largest manufacturer of soy sauce in Japan. The company has the manufacturing and marketing licence of Del Monte products in Asia and Oceania. Soy sauce accounted for 47% of 2000 revenues; wines and imported liquor sales, 30%; Del Monte fruit drinks, canned products and the food products, 20%; other operations, 3%. Kikkoman has 17 subsidiaries, 5 in the US, 4 in Japan, 3 in Germany, 2 in Singapore, one each in the NL, China and Mexico.

Environmental Profile



Social Profile



Comments

Kikkoman has established its Environment Preservation Division already in '72 and a first environmental report was published in '98. The 2000 report contains a chapter on environmental accounting and eco-performance indicators with a time series of 7 years. 8 factories are ISO 14001 certified. Kikkoman's goal is to obtain certification for all major factories by 2005. However, no general green procurement guidelines for its suppliers are defined. In '98, Kikkoman introduced an organic soy sauce and tomato ketchup that are produced with non-genetically modified ingredients. The proportion of these sales is less than 1%.

Kikkoman's reporting about its stakeholder management is okay, but it is very customer driven and too exclusively focused on the quality of its products. Several key factories have an ISO 9001 quality management system reflecting the high demands of Japanese consumers. The company has a corporate citizenship centre and donates around 0.5% (JPY 25 Mio) of its profit to community programmes. Employee relationship is good and based on a long-term engagement. In the Japanese soy sauce business, Kikkoman has a rather monopolistic position. Kikkoman has no global Non-GMO policy. At the moment soy sauce production in Europe is GMO-free, due to consumers' concern.

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